

THE TECHNOLOGY REVIEW

RELATING TO THE MASSA-
CHUSETTS INSTITUTE
OF TECHNOLOGY



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ALUMNI ASSOCIATION

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THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Boston, Mass.

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The tuition fee, not including breakage in the laboratories, is \$250 a year. In addition, \$30 to \$35 per year is required for books and drawing materials.

For catalogues and information, address

ALLYNE L. MERRILL, *Secretary of the Faculty,*

491 Boylston Street, Boston.

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- Denver**—ROCKY MOUNTAIN TECHNOLOGY CLUB, F. W. Horton ('06), Secretary, care Bureau of Mines, Foster Bldg., Denver, Col.
- Detroit**—DETROIT TECHNOLOGY ASSOCIATION, D. V. Williamson ('10), Secretary-Treasurer, The Detroit Edison Co., Whitney Bldg., Detroit, Mich.
- Duluth**—TECHNOLOGY CLUB OF LAKE SUPERIOR, Duluth, Minn., Floid M. Fuller ('06), Secretary, 812-814 Torrey Bldg., Duluth, Minn.
- Fall River**—TECHNOLOGY CLUB OF FALL RIVER, Earl R. Hamilton ('09), Secretary, Fall River Gas Works Co., Fall River, Mass.
- Hartford**—TECHNOLOGY CLUB OF HARTFORD, G. W. Baker ('92), Secretary, Box 983, Hartford, Conn.
- Hawaii**—TECHNOLOGY CLUB OF HAWAII, Norman Watkins ('98), Secretary, Box 385, Honolulu, T. H.
- Indianapolis**—INDIANA ASSOCIATION M. I. T., Wilson B. Parker ('88), Secretary, 805 Board of Trade Bldg., Indianapolis, Ind.
- Japan**—TECHNOLOGY ASSOCIATION OF JAPAN, Dr. Takuma Dan ('78), Secretary-Treasurer, 344 Aoyama Harajiku, Tokio, Japan.
- Kansas City, Mo.**—SOUTHWESTERN ASSOCIATION M. I. T., Hermann Henrici ('06), Secretary-Treasurer, 715 Reserve Bank Bldg., Kansas City, Mo.
- Lawrence** } TECHNOLOGY CLUB OF THE MERRIMACK VALLEY, John Arthur Collins, Jr. ('97),
Lowell } Secretary, 67 Thorndyke Street, Lawrence, Mass.
- Los Angeles**—TECHNOLOGY CLUB OF SOUTHERN CALIFORNIA, Paul E. Jeffers ('12), Secretary, Care Mayberry & Parker, Pacific Electric Bldg., Los Angeles, Cal.
- Louisville**—TECHNOLOGY CLUB OF LOUISVILLE, L. S. Streng ('98), Secretary, Louisville Gas & Electric Co., 311 West Chestnut Street, Louisville, Ky.
- Manchester**—TECHNOLOGY CLUB OF NEW HAMPSHIRE, Walter D. Davol ('06), Secretary-Treasurer, Amoskeag Bank Bldg., Manchester, N. H.
- Milwaukee**—TECHNOLOGY CLUB OF MILWAUKEE, Mitchell Mackie ('05), Secretary, Commercial Auto Co., Milwaukee, Wis.
- San Francisco**—TECHNOLOGY CLUB OF SAN FRANCISCO, J. H. ...

- Minneapolis—TECHNOLOGY ASSOCIATION OF MINNESOTA, DeW. C. Ruff ('07), Secretary, 502 Plymouth Bldg., Minneapolis, Minn.
- Montreal—TECHNOLOGY CLUB OF LOWER CANADA, E. B. Evans ('06), Secretary, Alma and Victoria Streets, Moncton, N. B.
- New Bedford—TECHNOLOGY CLUB OF NEW BEDFORD, Richard D. Chase ('92), Secretary-Treasurer, 607 Purchase Street, New Bedford, Mass.
- New Orleans—TECHNOLOGY CLUB OF THE SOUTH, J. H. O'Neil ('10), State Board of Health New Orleans, La.
- New York—TECHNOLOGY CLUB OF NEW YORK, 17 Gramercy Park, Ralph H. Howes ('03), Secretary, 105 West 40th Street, New York, N. Y.
- Philadelphia—TECHNOLOGY CLUB OF PHILADELPHIA, C. J. Walton ('14), Secretary, 1230 Arch Street, Philadelphia, Pa.
- Pittsburgh—PITTSBURGH ASSOCIATION M. I. T., Harry A. Rapelye ('08), Secretary, 2123 Oliver Bldg., Pittsburgh, Pa.
- Pittsfield—TECHNOLOGY CLUB OF PITTSFIELD, Earl E. Ferry ('12), Secretary, 40 Center Street, Pittsfield, Mass.
- Portland—TECHNOLOGY ASSOCIATION OF OREGON, John G. Kelly, Jr. ('14), Secretary-Treasurer, 711 Pittock Block, Portland, Ore.
- ~~☞~~ Luncheon—Every noon at the Hazelwood Lunch, Portland, Ore.
- Providence—TECHNOLOGY CLUB OF RHODE ISLAND, Clarence L. Hussey ('08), Secretary, Fruit Hill, 1547 Smith Street, Providence, R. I.
- Rochester—TECHNOLOGY CLUB OF ROCHESTER, W. G. Bent ('05), Secretary, Kodak Park Wks., Rochester, N. Y.
- St. Louis—ST. LOUIS SOCIETY OF THE M. I. T., Amasa M. Holcombe ('04), Secretary-Treasurer, care of Carr & Carr, 510 Pine Street, St. Louis, Mo.
- Salt Lake City—INTERMOUNTAIN TECHNOLOGY ASSOCIATION, Walter H. Trask, Jr. ('06), Secretary-Treasurer, University Club, Salt Lake City, Utah.
- San Francisco—TECHNOLOGY ASSOCIATION OF NORTHERN CALIFORNIA, Headquarters, Eaton Laboratories, 444 Market Street, San Francisco, Cal., George E. Atkins ('04), Secretary, Hobart Bldg., San Francisco, Cal.
- ~~☞~~ Luncheon—Second Tuesday of each month, during the Exposition, at The Engineers Club, 61 Post Street, San Francisco, Cal.
- Seattle—TECHNOLOGY CLUB OF PUGET SOUND, Joseph Daniels ('05), Secretary-Treasurer, 5511 University Boulevard, Seattle, Wash., Tech Headquarters—Anderson Supply Co., 111 Cherry Street.
- ~~☞~~ Luncheon—Third Friday of each month at 12.15 at the Commercial Club, 2d Avenue and Union Street, Seattle, Wash.
- Spokane—INLAND EMPIRE ASSOCIATION OF THE M. I. T., Philip F. Kennedy ('07), Secretary, 1129 Hamilton Street, Spokane, Wash.
- Springfield—TECHNOLOGY CLUB OF SPRINGFIELD, George W. Hayden ('95), Secretary-Treasurer, 283 Worthington Street, Springfield, Mass.
- Syracuse—M. I. T. CLUB OF CENTRAL NEW YORK, James R. Vedder ('07), Secretary, 704 Sedgwick, Andrews & Kennedy Bldg., Syracuse, N. Y.
- Urbana—TECH CLUB OF THE UNIVERSITY OF ILLINOIS, E. A. Holbrook ('04), Secretary, 915 W. Green St., Urbana, Ill.
- Washington—WASHINGTON SOCIETY OF THE M. I. T., H. G. A. Black ('10), Secretary, U. S. Patent Office, Washington, D. C.
- Worcester—TECHNOLOGY ASSOCIATION OF WORCESTER COUNTY, Louis E. Vaughan ('02), Secretary-Treasurer, 4 Fenimore Road, Worcester, Mass.

FIXED LUNCHEONS

- Akron—M. I. T. Club of Akron, Ohio, at the University Club, first Saturday of the month.
- Atlanta—Atlanta Association of M. I. T., at Hotel Ansley Rathskeller, Saturdays, at 1 p. m.
- Birmingham—Southwestern Technology Association, Turnverein, Saturdays at 1.00 p. m.
- Buffalo—Technology Club of Buffalo, Chamber of Com., on first Thursday of month at 12.30.
- Chicago—Northwestern Association of M. I. T., Morrison Hotel, Tuesdays at 12.30 p. m.
- Cincinnati—Cincinnati M. I. T. Club at the Metropole Hotel, Walnut Street, above Sixth, Tuesdays from 12.00 to 2.00 p. m.
- Dayton—Dayton Technology Club, Fridays, at 12.15 at the Dayton Engineers Club.
- Denver—Rocky Mountain Technology Club, Wednesdays, from 12.30–1.30 p. m. at Colorado Electric Club, Chamber of Commerce Bldg., Denver, Col.
- Indianapolis—15th day of each month at the University Club.
- Los Angeles—Technology Club of Southern California, at the University Club, on the first Wednesday of each month.
- Milwaukee—Technology Club of Milwaukee every Thursday noon at the University Club.
- Portland—Technology Association of Oregon. Every noon at the Hazelwood Lunch.
- San Francisco—Technology Association of Northern California, at the Engineers Club, 61 Post Street, second Tuesday of each month, during the Exposition.
- Seattle—Technology Club of Puget Sound, third Friday of each month at 12.15 at the Commercial Club, 2d Avenue and Union Street, Seattle.
- Shanghai—Technology Club of China. First Saturday of the month, at 12.30, at the Carlton.

SUSTAINING MEMBERS OF THE ALUMNI ASSOCIATION

Arthur H. Abbott, '07
Edward A. Adams, '69
Louis W. Adams, '03
A. C. Anthony, '86
C. B. Appleton, '84
C. M. Baker, '78
J. C. T. Baldwin, '88
S. Bartlett, '90
W. H. Bassett, '91
William L. Benedict, '80
E. M. Berliner, '06
Willard G. Bixby, '89
O. B. Blackwell, '06
Zenas W. Bliss, '89
Howard L. Bodwell, '98
Philip D. Borden, '73
William W. Bosworth, '89
James C. Boyd, '93
S. Parker Bremer, '93
Dickson Q. Brown, '98
Frank A. Browne, '06
George H. Capen, '83
George O. Carpenter, '73
Frank Cheney, Jr., '82
George E. Claffin, '88
Eugene H. Clapp, '95
F. W. Clark, '80
Arthur A. Clement, '94
Samuel P. Colt, '74
Whitney Conant, '68
F. L. Connable, '93
William D. Coolidge, '96
Joseph W. Crowell, '04
Edward Cunningham, '91
Herbert Dabney, '75
Daniel J. Danker, '15
W. C. Dart, '91
C. E. Davis, '93
George C. Dempsey, '88
Edward H. Dewson, '85
Parker Dodge, '07
Franklin W. Dolliber, '97
Coleman du Pont, '84
Irene du Pont, '97
Pierre S. du Pont, '90
Nathan Durfee, '89
Charles W. Eaton, '85
Sumner B. Ely, '92
Lewis Emery, '00
S. M. Felton, '73
James I. Finnie, '09
Arthur B. Foote, '99
T. A. Foque, '88
E. V. French, '89
George L. Gilmore, '90
C. W. Goodale, '75

George E. Hale, '90
George W. Hamilton, '80
Charles Hayden, '90
Edmund Hayes, '73
Albert S. Heyward, '92
E. Bruce Hill, '05
Franklin W. Hobbs, '89
Elliot Holbrook, '74
F. C. Holmes, '92
Arthur T. Hopkins, '97
Henry J. Horn, '88
Ethan H. Howard, '97
William E. Hoyt, '68
Charles W. Hubbard, '76
S. K. Humphrey, '98
E. Lawrence Hurd, '95
Edward H. Huxley, '95
George T. Jarvis, '84
Theodore Jones, '86
Clarence M. Joyce, '03
William R. Kales, '92
C. W. Kellogg, '02
William H. Lawrence, '91
E. H. Laws, '96
John H. Leavell, '07
Clifford M. Leonard, '00
Theodore J. Lewis, '76
Richard W. Lodge, '79
George H. Lukes, '92
W. E. McCaw, '92
A. G. McKenna, '91
P. F. McLaughlin, '08
Charles T. Main, '76
Austin B. Mason, '10
Sampson D. Mason, '70
George H. May, '92
George H. Mead, '00
William H. Merrill, '89
Frederick Metcalf, '90
Leonard Metcalf, '92
A. L. Mills, '76
Miss Susan Minns, '81
Henry A. Morss, '93
P. A. Mosman, '87
William J. Mullins, '85
James P. Munroe, '82
Atwood C. Page, '10
Frank H. Page, '85
William B. Page, '93
William I. Palmer, '91
F. A. Park, '95
Frank E. Peabody, '77
Eugene E. Pettee, '92
W. E. Piper, '94
William A. Prentiss, '75
R. B. Price, '94

Daniel W. Richards, '94
F. B. Richards, '84
Robert H. Richards, '68
Thomas G. Richards, '94
Charles W. Ricker, '91
Odin Roberts, '88
Dwight P. Robinson, '92
T. W. Robinson, '84
Allen H. Rogers, '90
E. W. Rollins, '71
James W. Rollins, '78
Montgomery Rollins, '89
Henry F. Ross, '82
John C. Runkle, '88
Norman F. Rutherford, '96
William E. Sawtelle, '99
A. H. Sawyer, '88
S. Schieffelin, '90
Lewis J. Seidensticker, '98
John L. Shortall, '87
I. L. Sjostrom, '88
Frank N. Smalley, '96
F. A. Smythe, '89
Walter B. Snow, '82
Frank G. Stantial, '79
G. F. Starbuck, '97
William C. Stearns, '71
William S. Stearns, '79
Charles A. Stone, '88
H. P. Talbot, '85
Sturgis H. Thorndike, '95
J. H. Towne, '90
Leonard Tufts, '94
W. Lyman Underwood, '98
E. Walker, '99
F. R. Walker, '00
Albert C. Warren, '74
Leonard C. Wason, '91
Karl W. Waterson, '98
W. H. Watkins, '95
Edwin S. Webster, '88
Henry A. Wentworth, '05
W. G. H. Whitaker, '04
W. R. Whitney, '90
Clarence B. Williams, '04
Mrs. Stillman P. Williams, '04
B. Thomas Williston, '77
Arthur Winslow, '81
F. W. Wood, '77
Kenneth, F. Wood, '94
Henry E. Worcester, '97
George M. Yorke, '93

January 17, 1916

William H. Pickering
Harvard College Observatory,
Mandeville, Jamaica, B.W.I.

June 10, 1919.

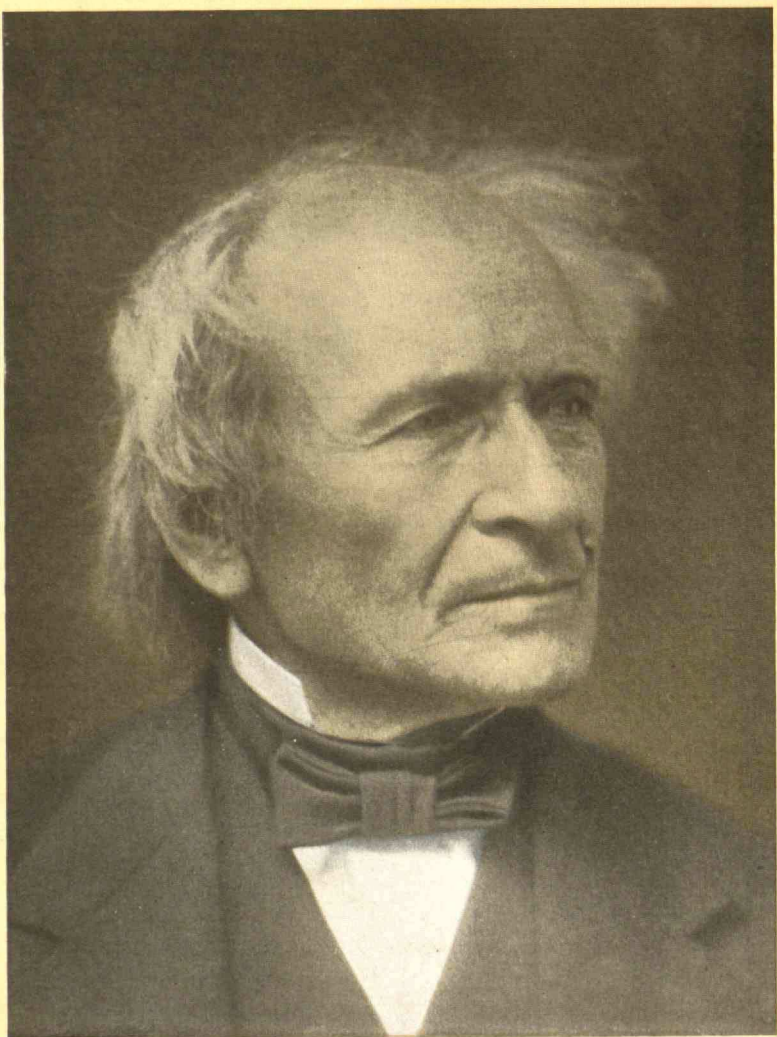
My dear Mr. Humphreys:

Yours of May 28 received. The portrait in question is of Alvan Clark, Sr., the famous telescope maker, with whom I as a young man was well acquainted. It was at one time at Harvard Observatory, but since my brother's death I have no means of knowing whether it belonged to the Observatory or not. I think it belonged originally to some of Mr. Clark's Cambridge descendants.

Yours very truly,

W. N. Dickering.
(Signed).

This picture in question was run in the January number of the Review, 1916, as a picture of Rogers.



REPRODUCTION OF A RECENTLY DISCOVERED PHOTOGRAPH OF
PRESIDENT ROGERS, PRESENTED TO THE INSTITUTE
BY DR. WILLIAM STURGIS BIGELOW

The Technology Review

Vol. XVIII

JANUARY, 1916

No. 1

THE DEDICATION REUNION

Plans maturing for the great event next June—General features of the program

Arrangements for the All-Technology Reunion next June, which has for its principal object the dedication of our new buildings in Cambridge, are going forward rapidly and most satisfactorily. The enthusiasm of the committees is paralleled by the interest of alumni all over the country who are looking forward to this memorial year to visit Boston and see the beautiful new home of the Institute, which has been our dream for many years.

The committees thus far appointed, with their officers, are as follows:

Headquarters, Registration, Hotels, etc., Prof. Charles F. Park, '92.

Tour of Charles River Basin, June 12, Henry A. Morss, '93.

Inspection of New Buildings, Reception and Tea, June 12, Joseph H. Knight, '96.

Technology Clubs Associated, June 14, James W. Rollins, '78.

Departmental Luncheons, June 14, Alexander Macomber, '07.

Day of the Classes at Nantasket, June 13, Frederic H. Fay, '93.

Golden Jubilee Smoker, June 12, Merton L. Emerson, '04.

Dedication, June 14, President Maclaurin.

Banquet, June 14, Charles C. Peirce, '86.

Decorations, Banners, Flags, etc., Prof. H. W. Gardner, '94.

Publicity, Souvenir Program, Special Souvenirs, etc., George C. Wales, '89.

Transportation, Henry J. Horn, '88.

Songs, Bands and Orchestras, George B. Glidden, '93.

Photographs and Moving Pictures, George C. Dempsey, '88.

Fifty Years of Technology, James P. Munroe, '82.

Grand Pageant, June 13, Edwin S. Webster, Chairman, Prof. Ralph Adams Cram, Marshal.

Fraternity Reunions, Stephen Bowen, '92.

Class Dinners, June 12, Fred A. Wilson, '91.

One new feature of the Reunion is bound to be immensely popular. It is the announcement that arrangements have been made for a boat direct from New York to Boston on the Metropolitan Line, for alumni coming by way of New York. The announcement of this boat has already changed the plans of some of our men who will go out of their way in order to make this trip. Indeed, there will be quite a delegation of Boston men who will go to New York for the purpose of coming on the boat with the visiting contingent. All matters relating to this feature of the Reunion are in the hands of the New York Committee, headed by Lester D. Gardner, '98 (17 Gramercy Park, New York City), and all communications relative to accommodations on the boat should be addressed to him. The number that can be transported is, of course, limited, and it will be desirable for members at a distance, who intend to make this trip, to write early in order to insure passage, as alumni in and about New York will undoubtedly register very soon and the large number coming from that city will reduce the accommodations by a very large percentage. Mr. Horn, chairman of the Transportation Committee, had a meeting of the passenger agents of railroad lines in New England, including the Metropolitan Steamship Line, and arrangements are being made for round trip tickets at one and one-third fare.

One of the Eastern Steamship Company's boats, either the *Bunker Hill* or the *Massachusetts*, will leave New York at 5 p. m. Sunday, June 11, and will arrive in Boston about 9 a. m. Monday, June 12. The transportation charge will be \$4; \$2 for each outside room, \$1 for each inside room, and \$2 for two meals, a special dinner on June 11, and breakfast June 12. There are about seventy sleeping berths in the lower cabin which are free. It will, of course, be necessary for the men to double up on rooms in order to accommodate the number who will desire to take the boat. An orchestra will be provided which will be supplied with Tech music, and the New York Committee is arranging a program that will make the trip a most delightful and memorable one.

This boat will be met down the harbor by Technology yachts and escorted to the wharf where it will be welcomed by a dele-

gation of alumni with bands, and taken in special cars to headquarters. The guests on the boat will be registered en route, thus saving this formality upon arrival. The Hotel Committee, of which Prof. Charles F. Park, '92 (Massachusetts Institute of Technology), is chairman, will be glad to make any room reservations that will be required. A special circular relating to hotels will be issued later on.

Since the last issue of the REVIEW it has been decided to hold a farewell meeting in Huntington Hall, Rogers Building, at 11 o'clock a. m., Monday, June 12. This hall will hold less than a thousand, and tickets will be given out to the applicants of earlier classes until the accommodations are exhausted. The orator on this occasion will be Mr. James P. Munroe, '82. The meeting will also be addressed by President Maclaurin.

New features are being arranged to add to the interest of the afternoon program on Monday, in connection with the tour of the Charles River basin. The afternoon tea on that day will be held on the roofs of the new buildings, from which point of vantage the view of Boston over the Charles River is most attractive.

The class dinners at six o'clock June 12, will be held at the City Club as far as possible where it is hoped that we may have very liberal accommodations. It may be desirable to house some of the classes in nearby hotels, in order to be convenient to the club for the Golden Jubilee Smoker, which is to be held at eight o'clock. A large number of special attractions are being prepared for this event, which has, in the past, proved to be a most sociable affair. Later on in the evening the student body will come to the City Club with a band and escort the alumni to Rogers Building, where we will sing and cheer it for the last time.

The stunts, which occur on Tuesday, June 13, promise to be elaborate and most original. It has become the custom to register these stunts in order that there may be no duplication and so that the stunt director can make suggestions that will bring the presentation within the limit of time necessary. Already seven classes have registered stunts, all of which are of an unusual and interesting character.

The most spectacular feature of the reunion will be the grand pageant in the great court of the Institute buildings on the evening of June 13. The director of the spectacle will be Prof. Ralph Adams Cram, head of the department of architecture. The great

court offers a wonderful setting for a presentation of this kind, and Professor Cram and his committee are arranging to take advantage of this most unusual opportunity. The lighting effects will be arranged by experts, and a number of unusual features will be used to enhance the general effect. This pageant is to have a character of its own and in its conception and execution will probably surpass anything of a similar character that has been offered in this country. In connection with it there will be a water fête, and a pyrotechnic display.

At 11 a. m. on Tuesday, June 14, there will be a meeting of the Technology Clubs Associated, and at noon luncheons by departments. Heads of departments and prominent alumni will make short addresses.

In the afternoon will occur the dedication exercises, which will be held in the great court of the new buildings. These will be of a dignified and impressive character, and will call together several hundred invited guests from all over the world, representing institutions of learning, city, state and national dignitaries, prominent names in the world of science, pure and applied, presidents of national societies, etc. In the evening will occur the grand banquet at Symphony Hall.

Arrangements are being made to have a group of a thousand students or more remain over to take part in the pageant, and form a great chorus at the dedication exercises. It is proposed to have a choir master to drill the students for two or three months, and, as a result of the request for Technology songs, it is hoped that we shall receive some unusually good offerings, some of which may be used on that occasion. The committee thought it would be a good plan to offer a cup as a prize for the best song, but this, of course, is only an incident, as our friends who are talented along these lines will realize the need of songs and will undoubtedly put out their best effort to supply that need. Please notice that the song competition will close March 15. It will be necessary to know by that time what songs we are to sing.

All over the country associations are spreading the plans of the Reunion Committee, and never before has there been such a keen interest in any Technology affair. All the committees are making preparations for a record crowd, practically up to the limit of the accommodations at their command.

In a very few weeks it will be necessary to make a canvass of

the entire number of former students, in order to get some idea of how many we are to expect. Please bear in mind that almost the entire program is equally attractive to the women as to the men, and some form of entertainment will be provided for the women Monday evening when the men have the smoker at the City Club.

In the opinion of the passenger agents, who have been most courteous in their desire to assist us, the Tech program will attract not only alumni of that institution, but friends as well as others who will be drawn by the unusual character of the spectacle to be provided by the Pageant Committee, the dedication of the buildings, and the buildings themselves.

Local associations will please bear in mind that each one has been asked to either bring or send an association mascot. This mascot is to be inanimate, and must be of such a size and shape that it will go through a door and can be carried by one or two men. It may have mechanical features, or it may represent a state or city or an episode in Technology life. Here is an opportunity for each association to produce something of an original character. A procession of these mascots, which will be designated by the name of the association sending them, will be the first order on the program at Nantasket on Tuesday, June 13.

A number of the classes have decided to publish class papers to help boom the reunion, and it is hoped that more will pursue the same course during the early spring.

President Maclaurin a Director

Dr. Richard C. Maclaurin, President of the Institute, has just been chosen director of the Equitable Life Insurance Society of New York. Dr. Maclaurin was elected in place of the late William Van Horne, president of the Canadian Pacific Railway. The selection of the Boston man for this position is an evidence of the growing tendency of the world of business to get into association with it the strength of the leaders in education.

ALL ABOARD!

Tech Steamship, New York to Boston.

Metropolitan Line, Pier 18, North River, New York. Boat leaves New York June 11, 5 p. m., arriving in Boston June 12, 9 a. m.

Will be met by Tech yachts in Boston Harbor and escorted to the wharf, where Hospitality Committee will be waiting.

Fare.....\$4.00

Special program is being prepared. Send your reservations early as only 800 can be accommodated.

LESTER D. GARDNER, '98,
17 Gramercy Park, N. Y. City.

SPECIAL REQUEST.

At the Technology Reunion in June will be shown a comprehensive and live exhibit picturing "Fifty Years of Technology." It will depict the phenomenal progress of applied science since 1866, and will indicate in various ways the important part which Institute men have played in that development. In one of the rooms will be shown the marked contrasts between the Technology and the Boston of forty or fifty years ago and of today. The Exhibit Committee is seeking, therefore, old photographs, documents, etc., relating to the Institute, as well as to the Back Bay of the '60's and '70's, and urges every reader of the REVIEW who may possess such to send them to the undersigned at once. They will be carefully preserved, and, if desired, will be returned after the exhibit is over.

JAMES P. MUNROE, *Chairman.*



CHARLES A. STONE, '88
The New President of the Alumni Association

NEW PLAN PLEASES

Happy solution of Walker Memorial problem suggested—
Council hears history of Technology Club of New York
and the State Aid Movement

Although the Council meeting on December 27 immediately followed the Christmas holiday, interest in the alumni work brought out a good attendance.

Secretary Humphreys announced the results of the recent election as follows: president, Charles A. Stone, '88; vice-president for two years, Joseph H. Knight, '96; secretary-treasurer, Walter Humphreys, '97; executive committee for two years, Harold E. Kebbon, '12, Grosvenor D'W. Marcy, '05; representatives-at-large for two years, Frank H. Briggs, '81, Lester D. Gardner, '98, H. W. Geromanos, '02, William G. Snow, '88, Charles W. Whitmore, '08. The alumni representatives elected to the Corporation are: Harry J. Carlson, '92, Henry J. Horn, '88, Samuel J. Mixer, '75.

It was moved that a nomination committee of three be appointed by the chair to nominate members of the various standing committees of the association.

In introducing the program of the evening the president told how impressed he had been with the work of the Alumni Council meeting eight times a year with its numerous committees and varied interests and the work of the alumni of many of the other colleges, some of which give only a part of a very short evening a year to furthering alumni interests. One of the reasons for our efficiency is due to the loyalty of the various local units. He referred especially to the success of the New York club, which is to be the gateway to the Reunion of 1916. He then introduced R. H. Howes, '03, secretary of the Technology Club of New York.

HISTORY OF THE NEW YORK CLUB

Mr. Howes traced the history of the New York club from the first meeting, which was held in the vicinity of New York City in 1892, until the present time. From 1892 to 1908 the little body of pioneers were kept together through the efforts of A. R. McKim,

'85. Indeed it has become a saying in New York that the club practically consisted at that time of McKim and a rubber stamp. Through courage, perseverance and personal sacrifice, Mr. McKim increased the Technology interest in New York, built up his little following of Tech men and he is now considered as much the father of this institution as George Washington is of his country.

In 1903 the club was incorporated, and a house secured at 38 East 28th street. One of the great enterprises of this club was when it decided to give luncheons at the house. Afterwards a restaurant was started, which was successfully run. Those who were associated together at the old house have formed lasting and enjoyable friendships, and it is largely due to the strong bond of common interest that sprang up between these men that the sustained advancement of the New York club is due.

After the house had been occupied five years the club realized that if it were to progress it would be necessary to seek larger quarters more suitable for its growing needs. The present club house, 17 Gramercy Park, was formally opened in 1908. The membership immediately increased from 200 to 500. After occupying the house for three years the quarters became too congested and it was decided to build a large addition to the building, renew the lease for a long term and start a campaign for larger membership. The lease was signed, the alterations were made, and the house was practically rebuilt and furnished, and a membership list of about 1,000 was secured.

He spoke of the unusual character of the Stein Room, which is a distinctive feature of the club. The walls are paneled to the ceiling, each little square having a hook for stein and pipe. These panels were sold to members, and although a man may be in Alaska, Russia or driving a red cross ambulance in Europe, he always feels that he owns a little space in New York City.

This year a change in the constitution has been made. The Board of Governors has been increased to seventeen members, and, in order that the selection may be made on a more democratic basis, the constitution provides that the officers shall be elected by the club at large rather than by the governors as heretofore. In his experience on the Board of Governors Mr. Howes said that there never had been any lack of harmony when the final vote was taken, and it was largely due to this close coöperation that the spirit of the club was so fine.

The club has an annual dinner early in the year and numerous entertainments during the fall and winter months. This year the entertainments have taken the form of war luncheon talks, the speakers being men of national reputation. The average attendance at these luncheons has been over 125 men, and they often extended into the middle of a busy Wednesday afternoon. Sometimes the attendance has gone as high as 200.

Mr. Howes stated that the Technology Club of New York was responsible for the formation of the Technology Clubs Associated, the first meeting of which was held in New York City; the suggestion of a beaver for a mascot for the Institute also came from New York. The New York club publishes a business directory which is found useful in bringing Tech men into business relations with each other. In his opinion one of the most important committees of the club was the Business Opportunities Committee. It was organized to help young Tech men to secure employment, but the general experience of the committee has been that it was more difficult to find men to fill the demand than it was to find positions for applicants. He referred to a number of interesting cases where employer and employee had been brought together through the work of this committee.

The speaker paid a high tribute to Treasurer Abbott, '81, of the New York club, who has been the mainstay of that organization. The volume of business done by the club would be quite satisfactory to many tradesmen in the city.

The aim of the club, he said, was to build up a club in New York that will have the same relative position among clubs as the Institute has in the educational world. By this he did not mean mere size or facilities, but referred to Tech spirit and atmosphere which has always been characteristic of the club.

THE STATE AID MOVEMENT

President Horn next introduced James W. Rollins, '78, former chairman of the Committee on State Aid, which so successfully carried through a campaign which resulted in securing for the Institute \$100,000 a year for ten years, at a most critical time in our history. Mr. Rollins' story of the campaign was intensely interesting. He said that in his public experience he had accepted two jobs with a great deal of trepidation: one was that of

securing a minister for an orthodox church, and the other was the chairmanship of the Committee on State Aid.

The Institute had been receiving a grant of \$25,000 a year from the state, and this appropriation was to run out in 1911. In 1910 a movement was started to interest the legislature in the work Technology is doing for the Commonwealth and the country, and two committees were formed, a Corporation committee and an alumni committee, to assist it. He spoke of the committee meetings that were held at that time throughout the state, especially of the meeting of the Technology men of Springfield when they offered a site to the Institute.

The Committee on State Aid consisted of James W. Rollins, '78, chairman; H. W. Tyler, '84, secretary; E. C. Hultman, '96, I. W. Litchfield, '85, A. F. Bemis, '93, J. A. Curtin, '92, F. W. Hobbs, '89, F. L. Locke, '86, A. A. Noyes, '86, F. T. Miller, '95, Henry A. Morss, '93, M. E. Pierce, '96, Jasper Whiting, '89.

In the opinion of Mr. Rollins much of the success of the committee was due to the guidance of two men: E. C. Hultman, '96, without whom we would have been all at sea as to methods of procedure; and the secretary, Professor Tyler, who was most active and efficient in keeping track of the various activities of the committee. Henry A. Morss, '93, the treasurer, had no difficulty in raising all the money that was needed from interested Tech men outside the state. The papers gave us credit for having the best organized lobby that was ever seen at the State House. There were about 800 Tech men working hard all over the state. Lists of representatives and senators were provided by the secretary, and these men very soon found out who of our friends could talk with them and interest them in our enterprise.

At the time the movement was started the expenses of the Institute were increasing, and careful study of the whole matter showed that Technology would need \$100,000 a year for at least a period of ten years to carry it through without a deficit. Many advisers suggested that we ask for \$200,000 in the hope of getting \$100,000, but the committee decided to ask for a hundred thousand and get it if possible. The campaign was conducted in a direct and business-like manner. The question first came up before the Committee on Education, and at the hearing there we were helped by a large number of people in Boston, among them Mayor Fitzgerald, who was especially friendly, and who stated that Boston

paid a large amount of the taxes, but would be glad to bear its part of the expenses. The next hearing was before the Ways and Means Committee. It was a more difficult task to convince this committee, but it was accomplished through the efforts of a large number of friends who appeared before it effectively. Mr. Rollins referred to the remarkable speech of Colonel Livermore who, in effect, stated that in the past Massachusetts had depended on her marine advantages for commercial progress; but she now depended on her manufacturing, and the manufacturers of Massachusetts depended for trained men on institutions like Technology. After a favorable report from the Committee on Ways and Means the bill passed the Senate with an amendment providing for eighty State scholarships. In the House there were two objectors who opposed the bill. It was necessary to get assistance from various politicians, and Mr. Rollins stated that in quarters where he had hardly expected to find help, he was greeted with sympathy and hearty coöperation; and when the time came for the final reading, the bill passed without any opposition whatever. Governor Foss delayed the signing of the bill until the very last day, but it finally was signed and thus was accomplished a result which has had a tremendous bearing on the future of the Institute since that time. It would have been difficult to go to citizens for money to be devoted to paying salaries and the ordinary maintenance of the institution. With this part taken care of by the state, private individuals have since contributed large sums of money so that the legislative aid given at that time was really the stepping stone to our greater successes.

Mr. Rollins referred to the report of the Committee on Closer Coöperation between the Institute and the Commonwealth, calling attention to the fact that that committee had shown in many ways not only the value of the assistance which we had already given to the Commonwealth, but to the much larger help which we can give when the Commonwealth recognizes its need and takes advantage of the facilities of the Institute.

NEW WALKER MEMORIAL PLANS

Prof. H. W. Tyler, '84, chairman of the Walker Memorial Committee, was next called upon. He said that one member of the committee and the architect had been incubating some new ideas that appeared to commend themselves to the committee

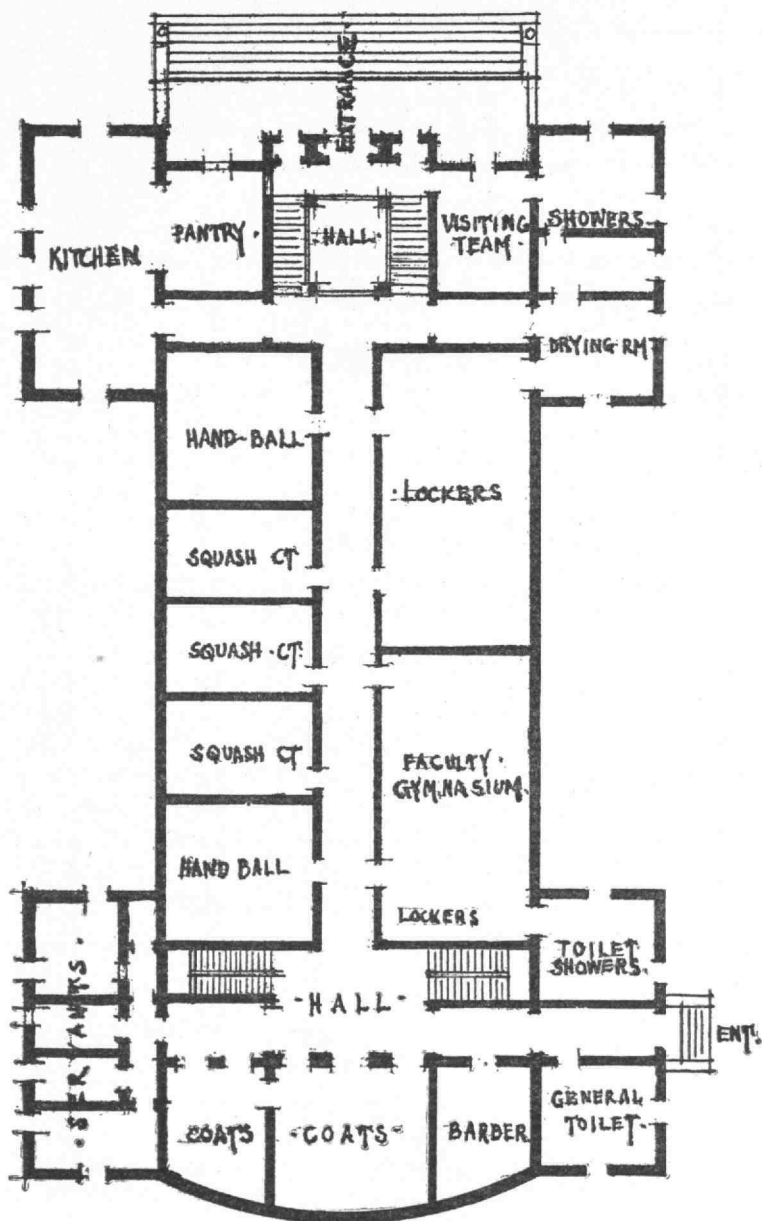
as a whole. The plans he showed are printed herewith in connection with this report. The front of the building now suggested will presumably be of the same general character and appearance as the earlier plan suggested in May, 1915, and published in the June (1915) number of the TECHNOLOGY REVIEW.

It was not contemplated in the earlier sketches to include the gymnasium and the dining hall in the Walker Memorial. It was recognized, however, that these two features ought to be closely connected with the Walker Memorial, and the new plan of the committee combines the dining hall and the gymnasium with the Union. The front of the building along the Esplanade is 130 feet by 60 feet. One hundred feet back of this building is another of the same size, parallel to it, and joining them is a central section 100 feet by 70. It is proposed that the central section serve as a large dining hall, going up two floors, and above that a gymnasium of the same area extending to the roof. Distribution of other features is not yet fully determined. Every thing on the plans shown in May is preserved, with considerably more floor space. The net available floor space is 50,000 square feet against about 25,000 in the former plan.

Everett Morss, '85, of the Executive Committee of the Corporation, was then called upon, and stated that the plan described by Dr. Tyler is only a sketch plan, which is really the combining of the suggestions of the Walker Memorial Committee with the other buildings which the Institute will have to provide. At first blush it did not seem that such a combination would work out satisfactorily to all those interested. Three other sketch plans were made, but the one showed, which was the first effort, appeared to meet the approval of the committee instantly as a very happy solution of a difficult problem.

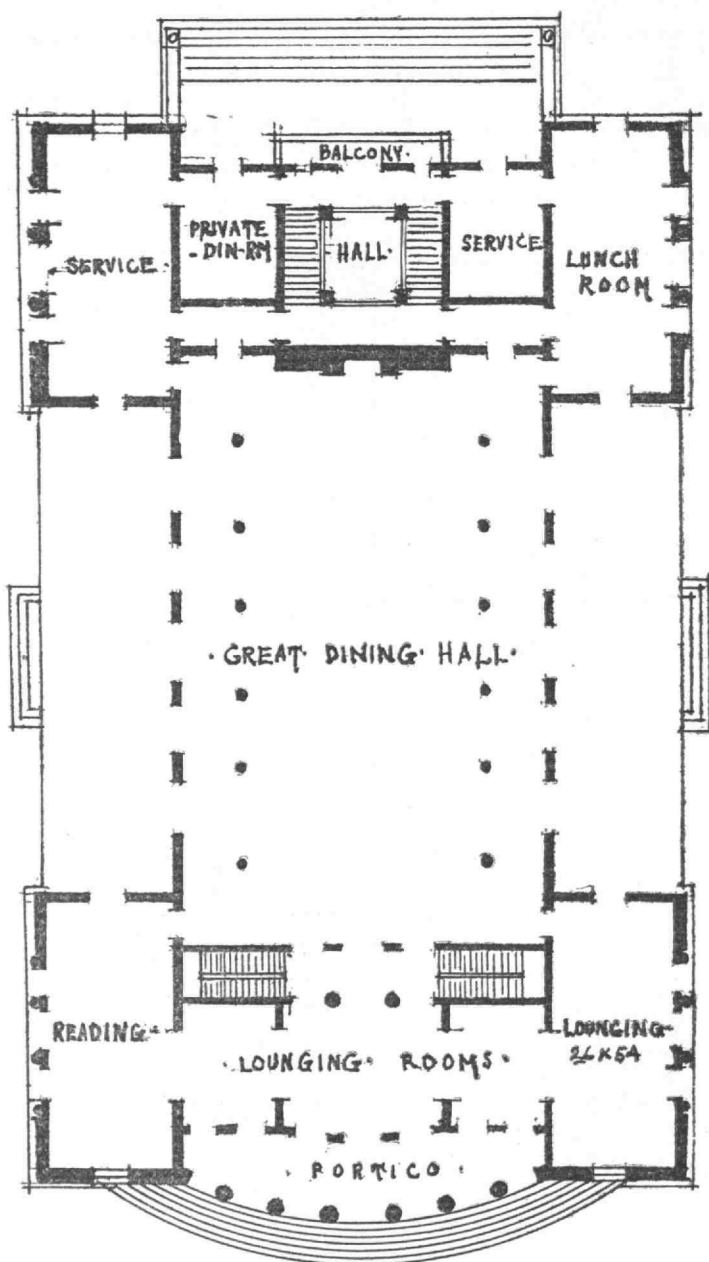
Harold E. Kebbon, '12, representing Mr. Bosworth, said that he was preparing plans of the buildings described on a large scale for purposes of estimate. The drawings will be ready by Saturday of next week, and it will take a few days more to make the estimate. He thought that in the early part of January the estimate should be ready. His opinion was that this would appeal to the alumni as a very complete student building.

In reply to a question, Dr. J. Arnold Rockwell, '96, a member of the Alumni Committee on Athletics as well as the Walker Memorial Committee, said that the uniting of these three student needs



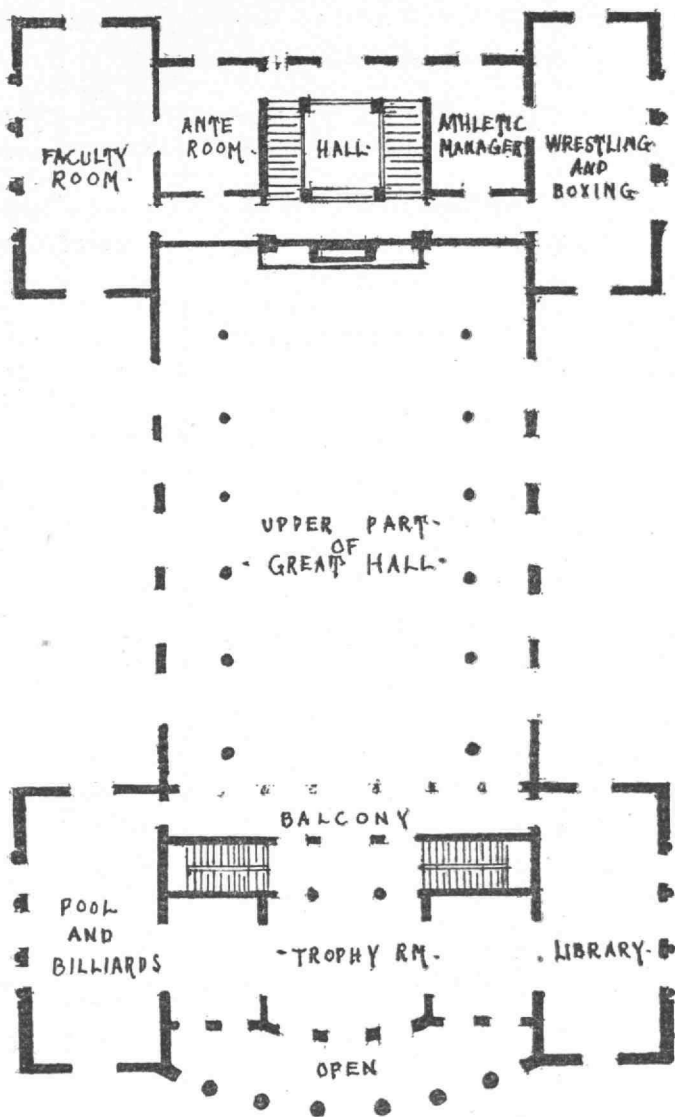
BASEMENT FLOOR PLAN

PROPOSED WALKER MEMORIAL



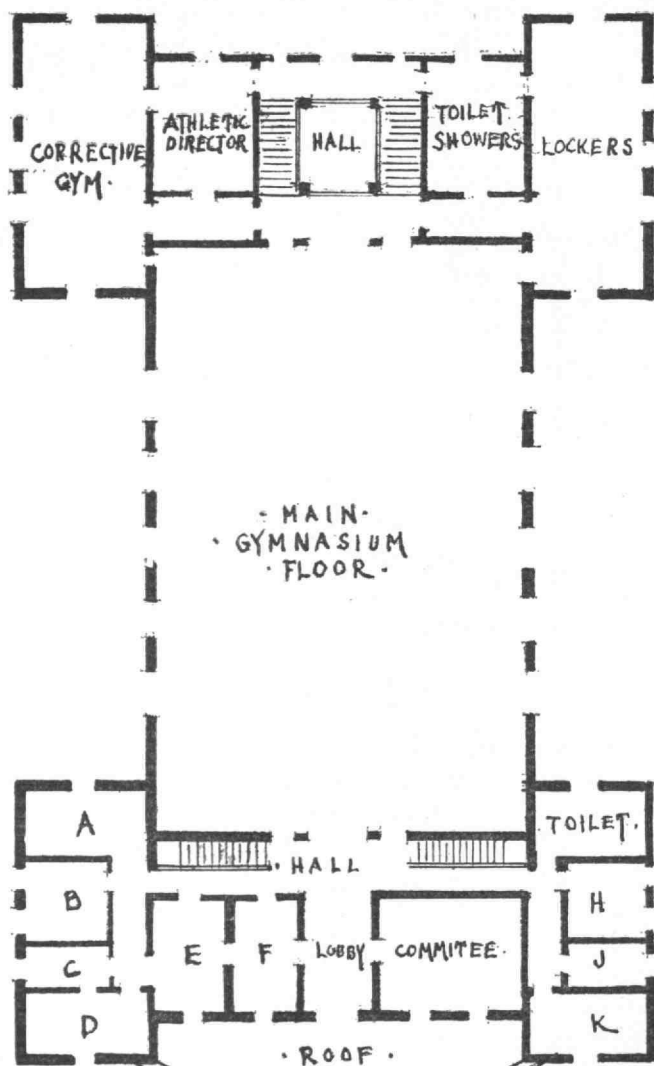
· FIRST FLOOR PLAN ·

PROPOSED WALKER MEMORIAL



• SECOND FLOOR PLAN •

PROPOSED WALKER MEMORIAL



- A THE TECH
- B THE TECH
- C ATH. ASSOC.
- D MUSICAL CLUBS
- E TECHNIQUE

- F TECH MONTHLY
- H TECH SHOW
- J TECH CHRIS. ASSOC.
- K TECH CHRIS ASSOC.

THIRD FLOOR PLAN.

PROPOSED WALKER MEMORIAL

under one roof was against the advice of some institutions. Their criticism was that the social events would divert the men from regular gymnasium work, but this particular plan, certainly to a large extent, obviates this objection and will give us a single building as a splendid memorial to General Walker. He said that that portion of the gymnasium located above the dining hall will give the required space for the prescribed work of the freshmen. The gymnasium equipment can be moved out of the way for dances, etc., giving a large floor space for this purpose. The other end of the building will be provided with rooms for boxing, wrestling, squash, and with lockers, etc., including auxiliary gymnasium apparatus. This will give very good facilities for gymnasium work. Later a field house can be built at the end of the property on the continuance of the Walker Memorial axis near the running track. There is also room under the grandstand for shower baths, etc. With the added facilities of a field house we shall have sufficient equipment for some time to come.

Mr. Hunter asked if the floor space required by the freshmen for prescribed work was also sufficient to give gymnastic facilities for the upper classmen who are now obliged to go to the Y. M. C. A. and other gymnasiums.

Dr. Rockwell stated that there would be some congestion between 3.30 and 6 o'clock. He thought, however, that there would be enough room at the end of the floor for the upper classmen to do gymnastic work. He said that the hope was, however, that the students could be interested in wrestling, boxing, squash, etc., which would give them all the exercise needed. He also stated that one room in the end of the building could be fitted up with gymnastic apparatus.

Dr. Tyler made a statement that the total floor space given to gymnasium features was nearly 15,000 square feet; this included 7,000 square feet in the basement. The latter is intended in part for a Faculty gymnasium, but in his opinion he thought this would never be overcrowded.

Seth K. Humphrey, '98, inquired if it was contemplated to have separate dining and lounging rooms for the alumni and the Institute staff. In answering that question Dr. Tyler stated that, in addition to the main dining room which contained 7,000 square feet, there was a dining room on the same floor containing 450 feet, a lunch room covering 1,200 feet, and on the floor above, a

room which is marked on the plan as a Faculty room having 1,200 square feet. This could be used as a dining room for the older men without actual exclusion of undergraduates. The committee has not worked out the number of rooms that can be used for private dining rooms.

In the front part of the building the third floor will be devoted to eleven offices of the student activities; the eastern end of the second floor will be given over to a library, the western end has been assigned to pool and billiards; and the trophy room will come in between. The pool and billiard room, which does not require a view of the Esplanade, may be changed. On the first floor will be a reading room containing 1,400 square feet and two lounging rooms covering together 2,600 square feet.

In reply to a suggestion from C. M. Baker, '78, Mr. Morss said that, from the standpoint of the Corporation, the broader needs of the Institute were very pressing. They could not well commit themselves until some such comprehensive plans embodying all these needs could be worked out. The Institute pocketbook contained just so much cash, and the amount devoted to the student buildings would have to be taken from the absolutely necessary equipment, if at all.

In response to Mr. Snow's inquiry as to how long it would take to put up the building described, Mr. Kebbon said that offhand, if the plans were completely worked out within the limits of cost by the middle of January, it might take a year. This might be erring too much on the side of safety, but a great deal depended on the weather conditions.

Mr. Litchfield, '85, secretary of the Reunion Committee, then spoke briefly of some of the new features of the reunion, and James P. Munroe, '82, described a most important development of one of the suggestions which had to do with an exposition of the work of the Institute in an original and striking manner. He called attention to the opportunity for advertising the Institute in a very dignified and effective way. His plan was to show, in a spectacular manner, the growth of applied science in the last fifty years and the part the Institute has played in it. He briefly sketched the various features, such as the facts in regard to the Institute itself, Technology and its relation to science, to the fine arts, to public service, etc. One feature of his suggested plan was to consider the Institute of the future. He believed that such an

exhibition would impress the people of Massachusetts with its direct value to the State, a point which there is great need for us to press at this time when the opportunity offers because of our obligations to the Commonwealth.

Jasper Whiting, '89, referred to the report of the Committee on Coöperation with the State, which was in line with the remarks of Mr. Rollins and Mr. Munroe. If we are to deserve the assistance of the Commonwealth, we must take every means to show its dependence upon the Institute. The Committee on Coöperation with the State made an extremely good report. In fact it has been referred to as an epoch-making report. Although it was made to the Corporation nearly a year and a half ago we have no knowledge of what that body had done about it. In this report were definite recommendations made by competent business men. He thought that the Council should ask the President what action had been taken upon it and how far the Corporation can carry out the plan, either as a whole or in part.

President Horn said that he would see the President and confer with him about it.

Reminiscence Number

The special feature of the class news in the April number of the TECHNOLOGY REVIEW will be reminiscences of Institute life by the members of the various classes. This subject gives an opportunity for nearly every Tech man to send his secretary some interesting or amusing happening that occurred while he was at Tech. The contributions should be of such a character that every reader of the REVIEW will go through the entire spread of class news.

We ask you who read this notice to sit down at once and send your class secretary something that will be appropriate to the issue so that it may be made really worth while.

Special Notice

With the first issue of *Pantehnicon* you will receive a questionnaire. It is of the greatest importance that *every man* fill out the blank to the best of his ability. We have started out to perform a difficult job and we want to do it right.

DESCRIPTION OF THE DORMITORIES

Ground broken last month for the first Unit to house two hundred and twenty students after careful study of plans

Ground has now been broken for the first of the dormitories at the new Massachusetts Institute of Technology. This event marks the beginning of permanent structures for the use of students, as the past two years have been devoted entirely to the building of the great educational plant. When the Institute acquired the Cambridge land it was soon decided that the half nearest Massachusetts avenue, the western half of the plot, should be taken up by the educational structures. In consequence the first of the new dormitories will be located at the eastern end of the Institute land on the Esplanade across Ames street, in the little square in which the architect's chalet is now set down. The land was a part of the original purchase filled out to a square by later acquisitions. Where the chalet actually stands the President's house will be built later, the gift of Stone and Webster as individuals. The eastern and northern portions of the lot will be devoted to dormitories, which will house somewhere about 220 students. Other dormitories will be needed, but these are the ones to be provided by the funds given for the purpose in June. The proximity of the dormitories to the President's house is intentional, on account of the close relationships which President Maclaurin and Mrs. Maclaurin have always maintained with the students as a body and as individuals.

The dormitory building, an L-shaped structure, will be separated from the President's green by a decorative wall, lined with trees, above which will rise the stone and brick façades of the students' houses. There will be a group of houses, four stories in height, so orientated and arranged that every sleeping room will have the advantage of exposure to the sun. One of the interesting preliminary investigations in connection with the planning of the new Technology has been an accurate computation of sun positions and elevations during the school year, and upon this have hung the

arrangement of the various study and lecture rooms and the placing of the President's house and dormitories.

He who approaches the dormitory from the Esplanade will have the end in view of the north-and-south wing, with a vista along the front of this building in perspective and in the distance the noble central unit. A decorative grille will here confront the visitor, and within the gate a paved walk with shrubs and greenery will lead to the entrance to the central house. With the dormitory itself, rising to four stories, the central unit goes to five and in fact six stories, although the latter does not show from the front, being within the limits of the top balustrades.

Altogether there are to be six buildings or units, separated by party walls like the houses in a city block, the houses being unconnected one with another by halls or passages, each one having its own stairway. The two end ones will be arranged for fraternity houses and the four intermediate ones will have a number of types of internal arrangement, this being dependent on the exposure to sun and weather. The dormitories are to be of fireproof construction, with the structural portions in reinforced concrete. For the exterior Roman brick will be used of the same warm tint as the stone of the educational buildings, which is now showing its richness even beyond expectation. The brick work will be in Flemish bond, with decorative filets and panels, the whole to be set off with Bedford limestone trimmings. There will be a basement course of the West Townsend granite, the material utilized in the lower story of the educational buildings, while above this the brick walls will be relieved by stone window sills, three or four courses of limestone and a dignified cornice.

The central unit, which will contain the offices and administration for the group, will be more ornate than the others, for above the first story will spring a portico two stories in height and supporting a decorative balustrade. Above the cornice line of the building will be here developed a loggia of three arches defined by pilasters, into which the rooms of the floor will open, in actuality a sleeping porch arrangement for the chambers of this floor. The arches of the loggia support an entablature and balustrade parapet, behind which will be a sixth floor of art dens, attractive probably to students in architecture, small in comparison with the other rooms and for the moderate purse. These will be roof-lighted and by windows in the sides.

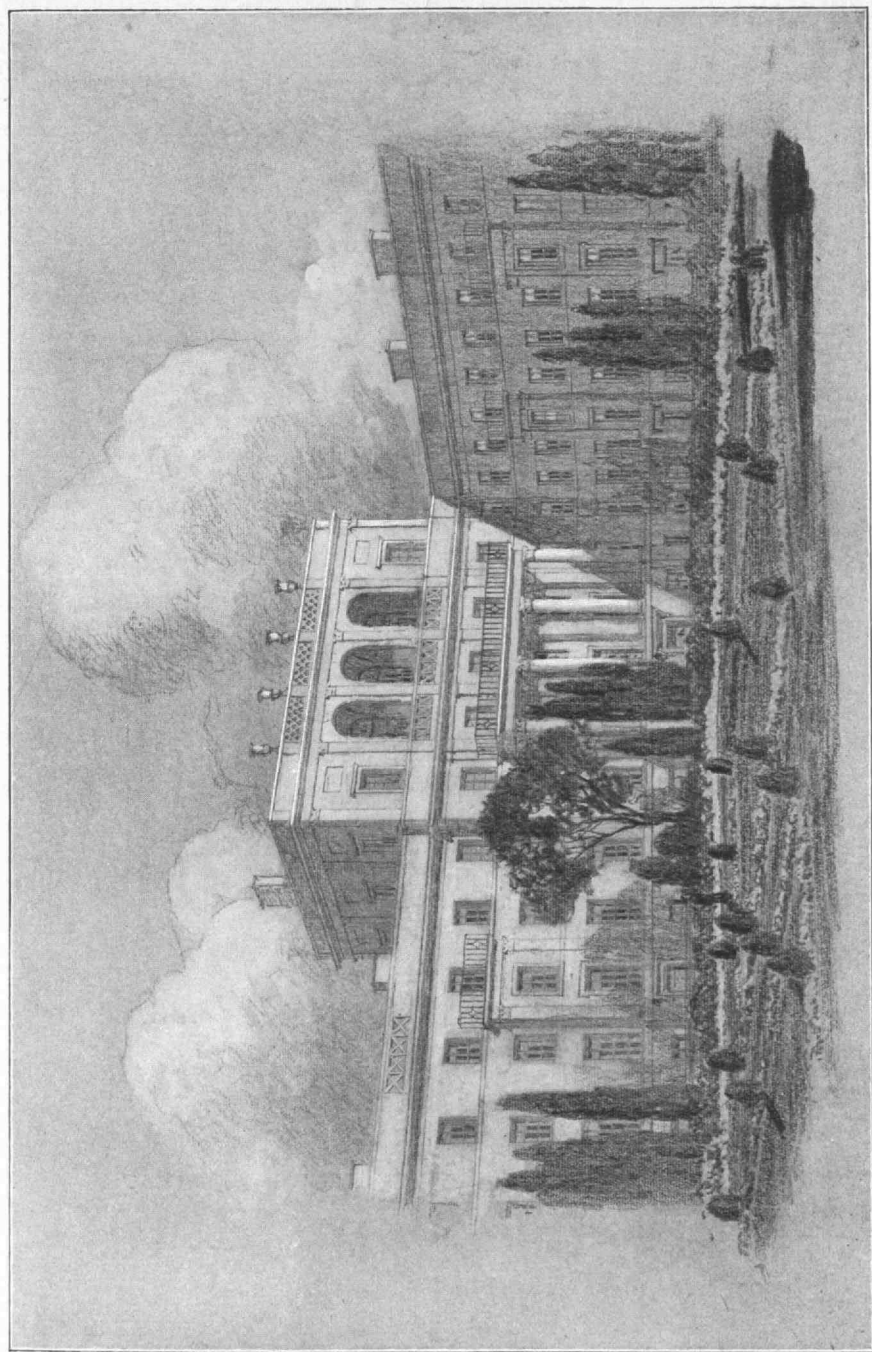
The portico and graceful proportions of the unit that bears it will close the view from the grille, a charming bit of architecture to delight those who may be passing along the riverbank.

One important feature of the constructions will be the absolute safety from fire. At the Tech Pop Concert in June Dr. MacLaurin was able to announce gifts which would care for this dormitory; two sums of \$150,000 and \$100,000, from anonymous donors to which Coleman du Pont, '84, added another \$100,000. The construction has begun and the houses will be ready for their student occupants by the opening of the student year in the fall.

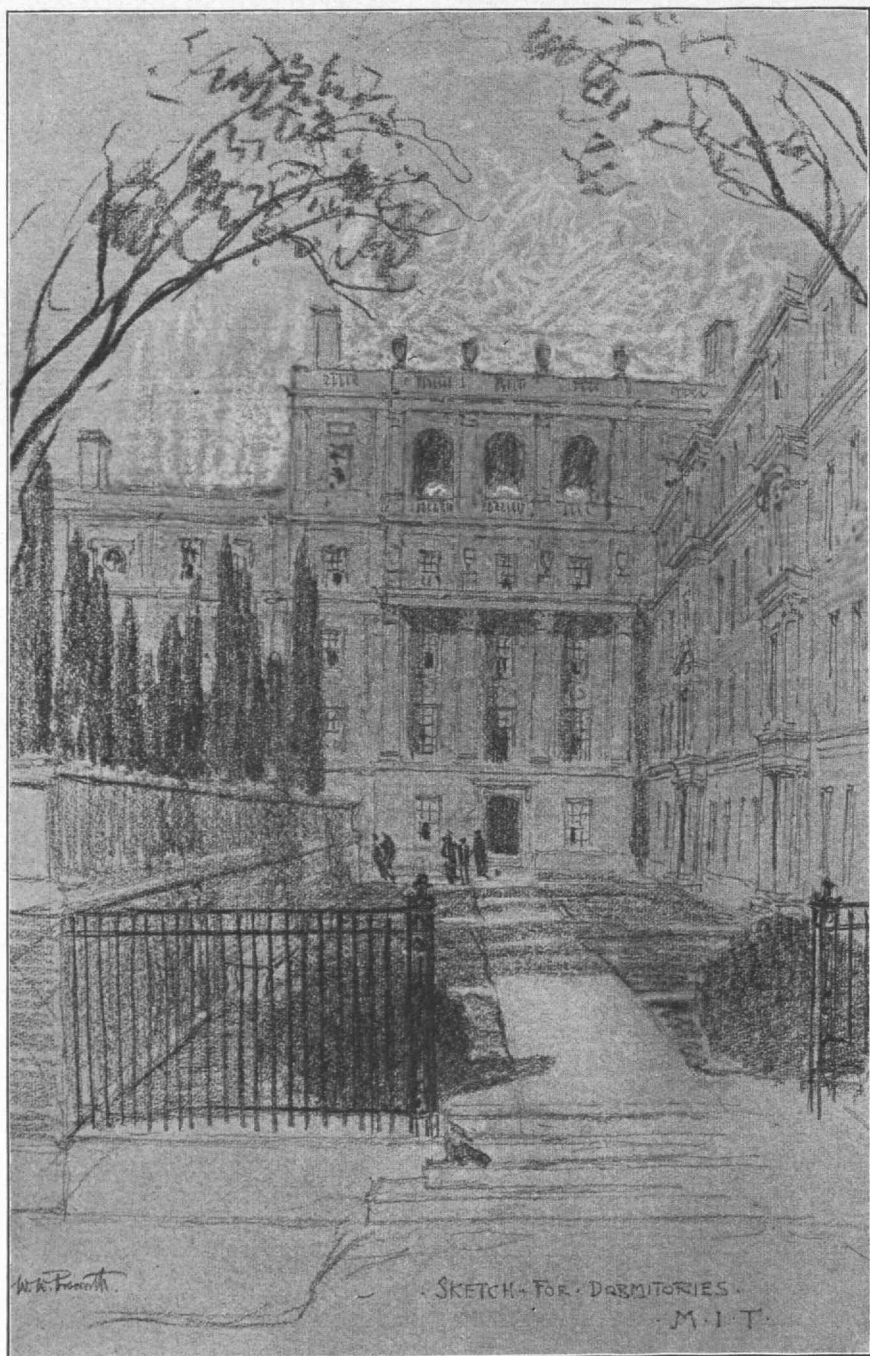
The whole group will be of reinforced concrete with monolith stairways also in concrete, and additional safety will be assured by affording to each sleeping room two exits, one of which will be by fire-balcony to the next house, beyond a party wall of fireproof material. The so-called "stairway" system has been chosen for the dormitories, each house being clustered about its stairway, which serves only the occupants of that house. It has advantages over the "hotel" system, where the rooms are along corridors or hallways, with a number of different stairways for general use. The type selected gives more the aspect of a home; a smaller number of students will be obliged to pass a given door with whatever of disturbance this may imply, and the small units, as has been said, afford a much greater factor of safety against fire and its consequent panics.

In the general dormitories there will be no living room, for this will be supplied by the Walker Memorial, a short distance away, but the fraternity houses, having their own mess and own social company, will be provided each with its little social hall.

Like all things that have had to do with this construction in Cambridge, the matter of dormitories has been exceedingly well considered. Groups of Tech graduates have taken up various phases and have treated them as professional problems, making regular reports on the different subjects. When John R. Freeman, '76, the Providence engineer, made his survey of the new buildings related to colleges, a study that came before a pile was driven and even before the architect was selected, dormitories came in for consideration. Later, and before 1913, A. Farwell Bemis, '93, interested himself in this problem of caring for the students, and in connection with committees and as an individual he has visited, observed and communicated his results to the Alumni Council of



ELEVATION OF DORMITORIES NOW BEING ERECTED



DETAIL OF DORMITORY ELEVATION
The Wall at the Left Encloses the President's Garden

M. I. T., a body not connected with Corporation or Faculty, but in which Technology matters of many kinds are discussed and digested. A report in January, 1913, contained observations on dormitories of University of Pennsylvania, Columbia, McGill, etc. Within a couple of months Mr. Bemis has again reported, and this time in connection with the plannings of the architect, in which his collections of material were found to be of distinct value.

For the units whose windows face east and west the sleeping rooms are arranged on both fronts, since those not caught by the morning sun will receive it in the afternoon. For this kind of exposure the suites are arranged each with a study, a dressing room and a bed room for two students. The study, which opens direct from the hallway, is a room 12 by 16, well lighted and furnished with an open fireplace. From this off the inner side leads the dressing room, with a big door opening to the bedroom with its large window. For lovers of fresh air this arrangement permits the room to be practically an outdoor one, since the dormitories will be fitted with casement windows, while beyond the closed door is the warmed dressing room. Four such suites occupy a floor of this type of dormitory, the lower story of which will afford some single rooms.

For the units which have a north and a south side the arrangement is different. Here the study, which is heated and has in addition an open fireplace, is to the north, while the sleeping room (for two students) has the southern exposure, with the dressing room lying between the other rooms. In the units of this type such a suite is placed at the ends of the house, while in the middle opposite the stairway is the study of a third suite for two students, with individual dressing and sleeping rooms.

These dormitories, being just to the east of the students' half of the Technology main property, will be conveniently located for the students. It will be only a couple of hundred yards to the Walker Memorial; while students using the athletic field can conveniently dress, undress and bathe in their own dormitories. So far as communication with the outside world is concerned, Main street is only six or seven hundred feet distant, a station of the Cambridge tube is six or seven minutes' walk, while Massachusetts avenue is only fifteen hundred feet away. For aquatic sports, the dormitories, being practically at the edge of the basin, are especially well located.

These dormitories will care for somewhere above two hundred,

and this will be about one-fifth of the number of students probably needing accommodations of the kind. It will, however, serve for the pattern by which to model other dormitories, when the practical problems of their administration—problems which each institution must work out for itself—have been solved. "We may have much to learn about dormitories," says President Maclaurin.

Resolutions on Mr. Tolman's Death

At a meeting of the Corporation of the Massachusetts Institute of Technology held Wednesday, December 8, 1915, it was unanimously voted that the following resolutions be spread upon the records, and that a copy be sent to Mr. Tolman's family and be printed in the *TECHNOLOGY REVIEW*:

The Corporation of the Massachusetts Institute of Technology desires to place upon record its appreciation of the long and self-sacrificing service of Mr. James Pike Tolman, of the class of 1868, who died July 28, 1915.

Elected to this body in 1882, one of the first among the graduates of the Institute to be so chosen, Mr. Tolman gave freely of his time and experience to promote the welfare of Technology. He served on many important committees, and at the time of his death was chairman of the Auditing Committee, of which he had been continuously a member for thirty years. In 1885 and 1886 he was chairman of the visiting committees on the departments of chemistry, physics and biology, and from 1907 until his death he was chairman of the visiting committee on the department of mechanical engineering, having been a member of that committee since 1889.

His wide acquaintance among the past students of the Institute, and his association with those who founded the school, gave his views, which were usually conservative, great weight in the deliberations of the Corporation. While he always presented and defended his opinions with vigor, his high courtesy and unfailing tact won him the warm affection, as his devotion and sound judgment won him the genuine respect of all his colleagues. In his death at the comparatively early age of sixty-eight, the State loses an exceptionally high-minded citizen, and the Institute a conspicuously devoted son.

TECH SONG COMPETITION CLOSES MARCH 15, 1916.

In connection with the All-Technology reunion of 1916 there will be need of some good, ringing Tech songs, and a committee has been appointed to secure contributions of songs, words and music, which can be used not only for the reunion but also at meetings of students and of alumni. It has been decided by the committee to offer a silver cup as a prize for the best contribution in this class, the decision to be left to a jury of five Institute alumni, to be named by the Reunion Committee.

We would also like to get particularly good words which can be set to popular music which everyone would be likely to know—and last and fully as important as the others are the little verses with an original twist like Gelett Burgess's " $xy^2 + 18xy \dots$ " which he composed for the reunion of 1909. In other words we ask every Tech man to send in a contribution to this department knowing that among the many offerings there will be a number that will be particularly good.

The song selected from the contributions received will be printed with other Tech songs in an alumni song book which will be used at the reunion and will also be available later on for class, fraternity and local alumni meetings.

Please bear in mind that one of the important considerations is to have music that is well within the compass of the average voice and which at the same time has verve and "go."

Please send contributions to George B. Glidden, 551 Tremont Street, Boston, Mass., Chairman of the Music Committee.

INTERESTING FIGURES OF REGISTRATION

One hundred and eighty-four colleges are represented at Tech
by former students—One instructor to every 6.1 men—
Sixty-six candidates for advanced degrees

The total number of men registered at the Institute is 1,900; last year there were 1,816. The total number of new men is 754. Of these new men, 431 are in the freshman class. The total number of men at the Institute who have attended another college before coming here is 559 or 29.4 per cent. of the entire registration. The total number of new students from other colleges is 266 or 35.2 per cent. of the new men registered. The total number of graduates from other colleges enrolled at the Institute is 331 or 17.4 per cent. of the total registration. The total number of the teaching staff at the Institute is 308, which allows one instructor to every 6.1 men. There are 66 candidates for advanced degrees, and there are 18 women students.

The percentage of men from Massachusetts in the freshman class is 75. The percentage of men from Massachusetts in the entire school is 55.

There are 184 colleges represented here. The list of colleges represented and the number of men from each is as follows: University of Alabama, University, Alabama, 1; Alabama Polytechnic Institute, Auburn, Alabama, 1; Albany Medical College, Albany, N. Y., 1; Amherst College, Amherst, Mass., 9; University of Arkansas, Fayetteville, Ark., 1; Armour Institute of Technology, Chicago, Ill., 3; Baylor University, Waco, Texas, 1; Bellevue Hospital Medical College, Bellevue, Neb., 1; Beloit College, Beloit, Wis., 1; Boston College, Boston, Mass., 2; Boston University, Boston, Mass., 2; Bowdoin College, Brunswick, Me., 1; Polytechnic Institute of Brooklyn, Brooklyn, N. Y., 5; Brown University, Providence, R. I., 2; Buchtel College, Akron, Ohio, 1; University of California, Berkeley, Cal., 11; Carnegie School of Technology, Pittsburgh, Pa., 1; Case School of Applied Science, Cleveland, Ohio, 3; Catholic University of America, Washington, D. C., 2; College of Charleston, Charleston, S. C., 2; University of Chicago, Chicago, Ill., 2; University of Cincinnati,

Cincinnati, Ohio, 2; Clark College, Worcester, Mass., 2; Colby College, Waterville, Me., 2; Colgate University, Hamilton, N. Y., 2; Colorado Agricultural College, Ft. Collins, Colo., 2; Colorado College, Colorado Springs, Colo., 3; Colorado School of Mines, Golden, Colo., 1; Columbia University, New York City, 6; Cornell University, Ithaca, N. Y., 7; Cornell College, Mt. Vernon, Iowa, 1; Creighton University, Omaha, Neb., 1; Dakota Wesleyan University, Mitchell, S. D., 1; Dartmouth College, Hanover, N. H., 10; Denison University, Granville, Ohio, 5; Drake University, Des Moines, Iowa, 2; Fargo College, Fargo, N. D., 3; University of Florida, Gainesville, Fla., 1; Furman University, Greenville, S. C., 1; Geneva College, Beaver Falls, Pa., 1; Georgetown University, Washington, D. C., 2; George Washington University, Washington, D. C., 1; University of Georgia, Athens, Ga., 1; Georgia School of Technology, Athens, Ga., 3; Gonzaga University, Spokane, Wash., 2; Grinnell College, Grinnell, Iowa, 2; Hamilton College, Clinton, N. Y., 3; Harvard University, Cambridge, Mass., 57; Haverford College, Haverford, Pa., 3; Hobart College, Geneva, N. Y., 1; Holy Cross College, Worcester, Mass., 2; University of Illinois, Urbana, Ill., 9; Iowa State College, Ames, Iowa, 1; Johns Hopkins University, Baltimore, Md., 2; Kalamazoo College, Kalamazoo, Mich., 1; University of Kansas, Lawrence, Kan., 1; State University of Iowa, Iowa City, Iowa, 1; State University of Kentucky, Lexington, Ky., 1; Lafayette College, Easton, Pa., 1; Lake Forrest College, Lake Forrest, Ill., 1; Lehigh University, South Bethlehem, Pa., 1; Leland Stanford Junior University, Stanford University P. O., Cal., 2; Lombard College, Galesburg, Ill., 1; Louisiana State University, Baton Rouge, La., 1; Loyola University, Chicago, Ill., 1; University of Maine, Orono, Me., 9; Marietta College, Marietta, Ohio, 1; Maryville College, Maryville, Tenn., 1; Massachusetts Agricultural College, Amherst, Mass., 4; Miami University, Oxford, Ohio, 2; University of Michigan, Ann Arbor, Mich., 8; Michigan College of Mines, Houghton, Mich., 1; Michigan State Agricultural College, Agricultural College P. O., Mich., 1; Middlebury College, Middlebury, Vt., 1; University of Minnesota, Minneapolis, Minn., 3; Mississippi Agricultural and Mechanical College, Agricultural College P. O., Miss., 3; University of Missouri, Columbia, Mo., 1; Monmouth College, Monmouth, Ill., 1; Moores Hill College, Moores Hill, Ind., 1; Mt. St. Mary's College, Emmits-

burg, Md., 1; National University Law School, 1; University of Nebraska, Lincoln, Neb., 2; College of the City of New York, New York City, 3; University of North Carolina, Chapel Hill, N. C., 2; Northwestern University, Evanston, Ill., 1; Norwich University, Northfield, Vt., 4; Oberlin College, Oberlin, Ohio, 4; Occidental College, Los Angeles, Cal., 1; Ogden College, Bowling Green, Ky., 2; Ohio State University, Columbus, Ohio, 2; Ohio University, Athens, Ohio, 2; Ohio Wesleyan University, Delaware, Ohio, 2; Oregon State Agricultural College, Corvallis, Ore., 1; University of Oregon, Eugene, Ore., 1; Ottawa University, Ottawa, Kan., 1; Pennsylvania College, Gettysburg, Pa., 1; Pennsylvania College, Pittsburgh, Pa., 1; Pennsylvania State College, State College, Pa., 3; University of Pennsylvania, Philadelphia, Pa., 7; Princeton University, Princeton, N. J., 9; Purdue University, La Fayette, Ind., 6; Radcliffe College, Cambridge, Mass., 4; Reed College, Portland, Ore., 1; Rensselaer Polytechnic Institute, Troy, N. Y., 1; University of Rochester, Rochester, N. Y., 9; Rhode Island State College, Kingston, R. I., 1; St. John's College, Annapolis, Md., 4; St. Paul's College, St. Paul, Minn., 1; Smith College, Northampton, Mass., 2; Military College of South Carolina, 3; Spring Hill College, Mobile, Ala., 3; Stevens Institute of Technology, Hoboken, N. J., 4; Syracuse University, Syracuse, N. Y., 2; University of Tennessee, Knoxville, Tenn., 2; University of Texas, Austin, Texas, 5; Texas Agricultural and Mechanical College, College Station, Texas, 7; Trinity College, Hartford, Conn., 2; Trinity College, Durham, N. C., 1; Trinity College, Washington, D. C., 2; Tufts College, Tufts College, Mass., 7; Tufts Medical College, Boston, Mass., 1; Tulane University, New Orleans, La., 1; Union College, 1; United States Naval Academy, Annapolis, Md., 16; Ursinus College, Collegeville, Pa., 1; University of Utah, Salt Lake City, Utah, 4; Valparaiso University, Valparaiso, Ind., 1; Vanderbilt University, Nashville, Tenn., 1; University of Virginia, Charlottesville, Va., 4; Virginia Military Institute, 7; Virginia Polytechnic Institute, Blacksburg, Va., 1; Washburn College, Topeka, Kan., 1; Washington and Lee University, Lexington, Va., 3; Wellesley College, Wellesley, Mass., 1; Wesleyan University, Middletown, Conn., 6; West Virginia University, Morgantown, West Va., 1; Whitman College, Walla Walla, Wash., 1; William Jewell College, Liberty,

Mo., 1; Williams College, Williamstown, Mass., 14; College of William and Mary, Williamsburg, Va., 1; University of Washington, Seattle, Wash., 1; University of Wisconsin, Madison, Wis., 3; Wittenburg College, Springfield, Ohio, 1; University of Wooster, Wooster, Ohio, 3; Worcester Polytechnic Institute, Worcester, Mass., 2; University of Wyoming, Laramie, Wyo., 1; Yale University, New Haven, Conn., 30.

Foreign institutions and universities represented: Armstrong College, University of Durham, London, Eng., 4; Central Technical College, London, Eng., 1; Central Turkey College, 2; Chi-li Provincial College, China, 1; Chinese Naval College, Canton, China, 3; Chinese Naval College, Nanking, China, 4; Ching Hua College, China, 1; Colegio, Mayor de Unestra del Rosario, Colombia, S. A., 1; Dalhousie University, Halifax, Nova Scotia, 1; École Polytechnic, Montreal, Canada, 1; Euphrates College, Turkey, 1; Königliche Technische Hochschule, Berlin, Germany, 3; Imperial Polytechnic College, Shanghai, China, 2; Imperial University of Japan, Tokyo, Japan, 4; Imperial University, Czar Nicholas I, Russia, 1; Institute National Central, Salvador, C. A., 1; Institute National de El Salvador, Salvador, C. A., 1; Institute of Santa Clara, Cuba, 1; Kiang Nan Provincial College, China, 1; Kyoto Imperial University, Japan, 1; London University, London, Eng., 1; McGill University, Montreal, Canada, 2; Nanking Provincial College, China, 1; Naval College at Chietoo, China, 1; Peking University, China, 1; Presidency College, Calcutta, India, 1; Queens University, Kingston, Canada, 1; Syrian Protestant College, Beirut, Syria, 4; Technische Hochschule, Darmstadt, Germany, 2; Technische Hochschule, Karlsruhe, Baden, Germany, 1; Tsing Hua College, China, 7; Union Medical College, Peking, China, 1; Universal Nacional de Colombia, Colombia, S. A., 1; Universidad Nacional, Colombia, S. A., 1; University of Manitoba, Winnipeg, Canada, 1; Zurich Polytechnical, Zurich, N. Switzerland, 1.

The registration this year shows 62 men from foreign countries, or 3.1 per cent. of the entire registration. The countries represented are as follows: Canada, 5; Central America, 2; Cuba, 1; China, 24; England, 6; Germany, 5; India, 1; Japan, 5; Nova Scotia, 1; Russia, 1; South America, 3; Switzerland, 1; Syria, 4; Turkey, 3.

THE STORY OF THE TECHNOLOGY SITE

Historical side lights on the influences that led to the selection and purchase of the present site in Cambridge

At the November meeting of the Alumni Council, Everett Morss, '85, gave a picturesque history of the site problem during the last ten years. All of it cannot be printed here, but the general outline should be preserved as a matter of record.

Early in the administration of President Pritchett, it began to be realized that present facilities would soon become inadequate and the question of a new site was raised. At the time the Walker Memorial Fund was collected the Corporation picked out a location for the new building, but as the question of moving came more to the front it was decided that it would be poor policy to erect the Walker Memorial until the question of the new site should be finally determined.

About 1904 two possible sites were discussed. One was the Stadium site in Cambridge and the other was a site at Hyde Park. Much work was done on each of these sites unofficially, but the efforts did not bring any material result.

The Corporation Meeting on June 1, 1906, was notable as the first meeting attended by the newly created term members and at this meeting a Site Committee was appointed, and Mr. Morss as president of the Alumni Association served with this committee. A meeting of the committee was held on June 25 and at this meeting the most promising location seemed to be a lot of land on the Fenway of about thirty acres in the vicinity of what is now Pasteur avenue, but the cost of the land was so great that there seemed to be no way in which the proposition could be financed.

During the summer a good deal of study was put on a suggestion to increase the facilities at the old site by the purchase of about one-half the railroad land between Clarendon and Berkeley streets, but the scheme was in many ways unsatisfactory and nothing came of it. During the next eighteen months the work of the Site Committee was confined to the inspection of various tracts of land in all parts of Greater Boston, but still the Fenway site seemed the most desirable location. There was a great desire on the part of

the alumni that the site question should be definitely settled before the Alumni Reunion and the inauguration of Dr. Maclaurin in June 1909, and with this in view Dr. Noyes was offered three alumni subscriptions of \$25,000 each, provided the Fenway site be purchased before the Reunion, but even this failed in its attempt to obtain any immediate action.

It was in 1909 that serious attention began to be given to the Cambridge site, though at first the objections seemed greater than the advantages and it was felt that a discussion of the Cambridge site might be principally advantageous in obtaining another site at a reasonable price. The more the Cambridge site was studied the more attractive it appeared but consideration of it was finally reluctantly dropped on account of the attitude of many citizens of Cambridge, who objected to the great amount of property held by Harvard University in the city exempt from taxation and who were, therefore, petitioning the legislature every year for a law that would relieve them from what they considered the burden of so much ex-taxable property.

In July, 1910, the President appointed an Advisory Committee, consisting of W. H. Kilham, '89, A. W. Rice, '91, H. J. Carlson, '92, and A. A. Shurtleff, '94, to study the architectural possibilities of various sites which had been suggested.

In December, 1910, it was decided that as the Cambridge site was impracticable, the most desirable of the possible locations was the tract on Commonwealth avenue occupied by the Allston Golf Club. It was found that thirty acres could be obtained for about \$500,000 and the only obstacle in the way appeared to be that the Corporation had no money for the purchase.

In this emergency the President appealed to Coleman du Pont, '84, asking him to give this site to the Institute.

Mr. du Pont gave the matter careful consideration and was the first man to appreciate the fact that thirty acres was not a sufficient area for our needs and that we required nearly twice as much land as this.

He promised \$500,000 toward the purchase price, provided that the Allston Golf Club site be purchased with a total area of not less than fifty acres and with certain other less important conditions.

This gift is of extraordinary importance in the history of Technology, and it must be a great satisfaction to Mr. du Pont to think

that his generosity was the foundation on which all our recent progress has been built.

It was just at this time that the Corporation petitioned the legislature for a grant of \$100,000 a year for ten years and when this grant was made the Corporation felt that the time had come actually to proceed with the new site. About the end of January, 1911, a delegation of alumni from Springfield called on the President and offered to Technology a beautiful site of thirty acres bordering on the Connecticut River and overlooking the valley and the Berkshires. When it was intimated to the Springfield men that our idea had grown and that we needed more than thirty acres, they offered to double the size of the tract if it would influence us to come to Springfield.

The spirit of the Springfield men was fine and their offer, which got into the papers, created a very serious discussion. Perhaps its most desirable effect was on the citizens of Cambridge, who suddenly realized that the question of the Technology site was likely to be settled very soon and that as things stood there was no likelihood of our coming to Cambridge.

They promptly realized that the proper development of the land bordering on the Charles River basin was really much more important to them than the question of the taxes, and there suddenly poured in on us invitations to come to Cambridge from the Citizens Trade Association, Cambridge Club, the Economy Club, the Tax Payers Association and last but not least the following order was passed by the Cambridge City Council and approved by Mayor Barry:

Resolved: That the City Council of the City of Cambridge wishes to record the approval of the movement to induce the Massachusetts Institute of Technology to locate on the land, now vacant, extending along the northeasterly site of Massachusetts Avenue between the Boston & Albany Railroad tracks and the river front.

This most hospitable action of Cambridge put a new phase on the entire matter and the Cambridge site was immediately taken under serious consideration. In the meanwhile options had been obtained on the Allston land with the exception of about 60,000 square feet in about the middle of the Commonwealth avenue front and the price of this small tract was so exorbitant as to seriously interfere with the whole scheme.

During the spring of 1911, the Advisory Committee reported in

general terms on all the sites suggested, and in detail showing possible plan of development of the Allston and Cambridge sites and the work of this committee was of great value.

By June, the legislature having granted our petition for financial assistance, the Corporation was ready to take action on the sites in question and the meetings of June 2 and June 7 were devoted to discussions of the comparative merits of the five most prominent locations. These were the Allston, the Cambridge, the Stadium, the Jamaica Plain and the Fenway sites.

These discussions developed the fact that the final selection must be the result of a good deal more study of details, and further that such a large real estate transaction could not well be handled by a large body of men; and the Corporation, therefore, appointed a committee of five with power to settle the matter by purchasing the site that seemed to them most desirable. This committee consisted of President Maclaurin, George Wigglesworth, Francis R. Hart, '89, Edwin S. Webster, '88 and Everett Morss, '85.

At the first meeting of this committee, June 13, 1911, Mr. C. W. Whittier offered his services as real estate expert without compensation.

The offer was gratefully accepted and he immediately proceeded to gather data. He made his report two weeks later, and upon receipt of this report the committee were unanimous in their preference for the Cambridge site, provided it could be obtained at a reasonable price.

Mr. du Pont had made his gift dependent upon the purchase of the Allston site, but upon the matter being presented to him by the committee he waived his preference for Allston and agreed to accept the Cambridge site.

The Cambridge land was held by thirty-five different owners, of which the Ames Estate was the largest, and the committee, therefore, carried on its negotiations with the Ames Estate for the whole tract.

Negotiations were very active during the last two weeks of July, but there was a great difference between the price the owners thought they ought to get for their land and what the Institute felt able to pay; and by August 1 negotiations had apparently failed and the subject was dropped, and two members of the committee went to Europe. Early in October the owners opened negotiations again with the committee and at the Corporation meeting on

October 12 the committee was able to report that it had come to an agreement to purchase two million feet of land for \$775,000, subject, however, to a number of conditions on both sides.

The principal Technology conditions were that all restrictions on the land should be removed, that all streets running through the property should be eliminated so that we could have the bulk of the land in one piece without streets.

To accomplish this result, it required releases from many owners of surrounding property and action by the Cambridge City Council to close the streets through the tract.

At the first hearing before the City Council considerable objection developed, but concessions on both sides finally eliminated most of these objections, and finally the City Council passed the necessary orders, which were approved by Mayor Barry on January 1, 1912.

Even after that, there were complications with some of the smaller owners, but by the end of March all the necessary deeds were finally executed and Technology became the actual owner of the property.

The site cost \$275,000 more than the amount of Mr. du Pont's gift, but this amount was finally raised from the friends of the Institute in Boston, the larger part of it coming from members of the Corporation.

Status of Boylston Street Property

The Massachusetts Institute of Technology, before it can dispose of its present site, will be obliged to make settlements with abutting owners of property, as the Land Court, in registering title to the property, finds these owners under restrictions imposed by the Commonwealth that the square should forever be kept as an open space, acquired equitable easements of which they cannot be deprived.

The land on which the Technology buildings stand was a free gift from the Commonwealth, and, being an educational institution, it has not been subject to taxation by the city of Boston.

The assessors of Boston estimate the value of the land owned by the Institute at \$1,578,000 and the buildings at \$252,000, making a total valuation of \$1,830,000. The market value of the land is probably much in excess of this.

FIFTY YEARS OF TECHNOLOGY

An anniversary exhibition of Technology achievement to be shown on the occasion of the Reunion

At the time of the dedication of the new buildings it is proposed to present to visiting alumni, as well as to the general public, an anniversary exhibition of Technology achievement, which is to be called "Fifty Years of Technology."

The object of the exhibition is to show the advancement in various lines of endeavor that have taken place since the Institute was founded and the large part that the Tech men have had in this progress. In this exhibition there will also be an opportunity to make the public and the legislature realize what Technology has done to build up the state and the country.

The exhibit will be made as spectacular as possible, and will not employ to any great extent the ordinary cut-and-dried methods. In the first room, for instance, will be facts in regard to the Institute itself, which will show in a live way the development of the Institute in all its departments, as well as of athletics and other student activities.

In the next room, the relation of Technology to the development of science will be shown by picturesque methods. It will be possible for us to secure early forms of the telephone, electric light apparatus, and such other fundamentals as have been developed during half a century. The connection of Tech men to this development will also be brought out.

In another room there will be an exhibit showing the relation between Technology and the fine arts. Probably this room will contain examples of the work of our prominent artists, sculptors, etc. The work of architects will also be exhibited, and here will also be an immense library of the books that have been written by Tech men.

Another room will be devoted especially to the part that Technology has played in the development of education, and still another will emphasize the part our alumni are taking in public service, such as the development of water supplies, city planning, and other similar lines which have had such an important in-

fluence on the problem of civilization in America. Here will also be shown the activities of alumni as members of boards, commissions, etc.

Another room will be devoted to memorabilia, pictures of Tech professors and officers of the old days, views of the Back Bay in the early 60's, etc.

The entire exhibition leads up to a great architectural vision of the things that still remain to be done in applied science. It is contemplated to have a painted frieze representing the Pilgrims' Progress of Technology, and these pictures will be of such a nature that they can be used for a permanent exhibition or possibly for permanent decorations in some of the rooms in the new buildings.

The details of this feature of the reunion have not been fully worked out, but the possibilities are almost infinite, and it is intended to take as much advantage of them as possible. It will be a splendid advertisement of the Institute, of a dignified sort, showing what the contribution of Tech men means to the country.

The committee, of which J. P. Munroe, '82, is chairman, will heartily welcome any suggestion or contributions that will add interest to this exhibition.

Wireless at the Summer Camp

During the past summer the members of the Massachusetts Institute of Technology summer school, encamped in the Maine woods, were kept in touch with the outside world by means of two wireless stations. Two wireless sets were employed by the students: One, a receiving set loaned to the campers by the United States Government; the other, a set built by the students. A flag pole was used as the support for the antennæ, while the ground connection was in the form of a galvanized-iron pail, loaded with stones and sunk in a nearby lake; the copper connecting wires being wound around the pail to insure good contact. Although the camp was situated eight miles from the nearest village, the students were constantly informed as to the world's doings by wireless bulletins which were received by their apparatus.

RELATIVE STANDING OF STUDENTS

Decided improvement made by Fraternities over last year's record—Relative standing of Fraternities

Last year for the first time the relative standing of students was published, and the positions held by fraternity chapters at Technology as regards their academic standing was announced. During the past year another study of the relative standing of students has been made, the average records of the first, second, third and fourth year classes have been plotted and compared with the records of these classes as they were a year previous.

In 1913-14 the average record of the first year class stood at a point represented by 69 per cent.; the record of the second year class stood at 63; the record of the third year class was 69, the same as that of the first year class; and the fourth year class made an average record of 71. During last year, 1914-15, the average of the first year class stood at a point represented by 67 per cent.; the second year class made a record of 65; the third year class, 67, again the same standing as that made by the first year class; and the fourth year class made an average record of 70 per cent.

The students of last year did not acquire as high a standing in the first, third and fourth years, but the students of the second year class stood a little higher than did the students of the second year in 1913-14. The two plots of these records made in the two consecutive years are similar in shape; the records in both cases of the second year drop off from the records of the first year students, and in the third year they rise to the standing of the first year class, and in the senior year rise above the records of the lower classes.

While there was but little change in the average of all the students of all the years, the students in 1913-14 stood a little above those of the following year.

The average standing of the fraternity students in 1914-15 rose above the standing of fraternity students in 1913-14. In fact, the standing of the fraternity students during the past year was the same as the average of all the students; hence, the fraternity students and the non-fraternity students made, during the year, a similar academic standing.

It is very gratifying to note the interest shown by fraternity students in their academic standing and to find that during the past year the academic standing has been raised and that the difference between the standing of the chapter which has the highest record and that of the chapter which has the lowest record is not so great as the difference between the two chapters holding these two positions in 1913-14.

The relative standing of the fraternities during 1914 was as follows:

Beta Theta Pi, Theta Chi, Theta Xi, Delta Psi, Sigma Chi, Delta Kappa Epsilon, Delta Tau Delta, Delta Kappa Phi, Chi Phi, Lambda Chi Alpha, Phi Sigma Kappa, Delta Upsilon, Phi Beta Epsilon, Alpha Tau Omega, Phi Gamma Delta, Lambda Phi, Theta Delta Chi, Phi Kappa Sigma, Sigma Alpha Epsilon.

WALTER HUMPHREYS, '97.

Appointments Confirmed

The following appointments, recommended by the Executive Committee, were confirmed at the last meeting of the Corporation:

Mr. Simeon C. Keith, Jr., lecturer on problems of industrial biology; Franklin L. Hunt, half-time instructor in physics for one year; John Hyneman, assistant in civil engineering for one year; Percival J. Munn, assistant in civil engineering for one year; Ellis S. Tisdale, assistant in civil engineering for one year; Allen R. Greenleaf, assistant in physics for one year; Theodore D. Parsons, assistant in military science for one year; James A. Tobey, assistant in military science for one year; H. N. Carlson, assistant in electrical engineering for one year; V. C. Kennedy, assistant in electrical engineering for one year; Henry J. G. Rudolf, research assistant in the department of electrical engineering, in succession to Albert C. Brown, resigned; A. S. Dana, part-time assistant in electrical engineering.

CROSS COUNTRY RUNNING

Consistent work being done in this department, although competitive tests have dropped below former years

In the department of athletics cross-country running is the school that gives the real test of the work of an individual. Our training opened with a satisfactory response from men having past experience, and a good team was soon in the making. The first competitive run took place at Amherst against the Massachusetts Agricultural College, October 16, Technology winning the individual and team honors. Raymond G. Brown, '16, captain, took first place, and his team supported him well, the score being 23 for Tech to 33 for the Aggies. At this meet two of our best men in the squad were unable to make the trip, and three other candidates, all of whom seemed likely to make a position, had ceased training. This victory, instead of stimulating the men, seemed to have had an opposite effect; for two of the victorious team never again reported for training, and this serious loss, added to those who had already deserted, greatly weakened the squad, and the opportunities for advancement were allowed to slip away.

On October 23, a dual run with Harvard was held over the Harvard course at Belmont. Again some of the men who were expected to come out did not report, and the result was a victory for Harvard, the score being 27 points for Harvard and 39 for Technology. Captain Brown again captured individual honors for the team, and the next two Technology men's scoring defeated their opponents.

The New England Intercollegiate Cross-Country Championship was held at Franklin Park under the auspices of Technology, November 13. The team score was won by the University of Maine; Dartmouth was second, and Technology third. Captain Brown of Technology won the individual championship in 28 minutes, 48 seconds, leading the nearest opponent 29 seconds at the finish.

On the following Saturday the I.C.A.A.A. Cross-Country Championship was held at Franklin Park over a course one mile longer than the New England route. A heavy wind and wet

footing seemed to upset the predicted outcome, as Cornell, the favorite, was forced to take second place by the University of Maine. Tech fell back to the eighth place out of the twelve colleges represented. Our first man to finish was Captain Brown, who took fifth place, the highest position made by an Institute athlete in these championships. This closed the Varsity season, which as a whole was rather disappointing when considered in connection with the good promise at the opening of the term.

It is to be remembered, however, that athletics at Tech can never become an absorbing business. It is unavoidable that but limited time can be afforded for this purpose. In order that our alumni may form an opinion of the present status of track athletics at Tech, the following statistics, taken from my daily training records, are offered:

Captain Brown reported for practice two-thirds of the available days for training between the opening of college and the New England cross-country run, which is about the amount of time desired. He had practically the same record up to the time of I.C.A.A.A.A. His teammates did not have quite so good a record. The time spent in actual training was about twenty minutes each day of practice, including walks. In preparing for the freshman-sophomore relay race on Field Day, R. K. Wells, '19, attended practice 65 per cent. of the possible number of days. W. R. C. Russert, '18, the fastest runner on either team, was present 50 per cent. of the possible number of days, and showed the highest attendance of any sophomore candidate.

In regard to the weight question, which is so important to the critic, we have found of 86 men who took regular training in cross-country relay racing, or general track and field athletics, 52 men gained a total of 99 pounds, the other 34 men lost a total of 56 pounds, 3 ounces. The average of the 86 men shows a gain of practically 8 ounces per man.

It is our desire to make the student's athletic program coöperative with that of his studies and not exploit his athletic ability to the detriment of the latter.

The problem is to fit the undergraduates physically and morally with the opportunity we have, so that they can engage in competitive athletics to an extent that will develop the manly physical side and give them more stamina and better courage to pursue their studies at Technology. Although, as has been indicated,

some of our promising cross-country men have deserted at a time when they were most needed, a very large number of faithful fellows are striving persistently and consistently for the better athletic status of Technology, and with a firm determination to foster this feature of sport and keep the reputation of the Institute up to its high standard.

FRANK M. KANALY,
Instructor in Physical Training.

Class Publications

The *Tea Kettle*, published by the class of '90, has just made its appearance loaded to the spout with information about the great Technology Reunion next June, and calling attention to the part that '90, the celebrating class this year, is to play in connection with the festivities. The *Tea Kettle* contains the pictures of Col. Charles Hayden's yacht, "Wacondah," which will be in commission for the use of his classmates; also a picture showing the football teams of the mechanical department, '90, and the electrical department, '90, taken in October, 1888.

Another issue of the *Retort*, published by the class of '02, has also made its appearance. The features of the *Retort* are the coming grand reunion, the forthcoming class book, and the alumni banquet. The paper has six pages. A number of interesting letters from classmates appear in this publication.

These and other class publications are doing a great deal to build up class interest, and it is hoped that more of the class organizations will try this kind of publicity. It is especially desirable to do so at this time, as we want to awaken every ounce of enthusiasm possible in the coming reunion in order that we may show the country what Technology can do when it really sets out to do its best.

Memorial to Professor William R. Ware

The Board of Governors of the Alumni Association, School of Architecture, Columbia University, is considering some form of permanent memorial to the memory of the late William R. Ware. A joint committee is to be formed to secure this memorial.

STUDENTS PRACTISE REPORT WRITING

Teaching the undergraduates how to present facts in an attractive and convincing way

The juniors at the Institute are this term having a novel study, that of report writing in connection with the new Course XV, engineering administration. It has been popularly said that students graduating from college have still to learn which side of a check to endorse, although they have been well provided with information concerning Greek, Latin and the ologies. Technical men have hitherto in general paid little attention while in school to the needed literary accompaniments of engineering work, and have had no special instructions with reference to the presentation of the facts in a manner that will make them valuable.

The whole plan of the course in engineering administration is to present to the students some of the essentials in the business management of engineering undertakings. Accounting, industrial organization, statistics, banking and other items not heretofore counted in the education of engineers, have been taken up and at the moment the students are having exercises in report writing.

From its beginning last year the course has been a great numerical success. For the initial year it was necessary to add to the instructing staff an expert in methods of accounting and the present term has seen two new men added to the list. One of these, William Green, a M. I. T. graduate of '06, has among other duties the cares of this report specialty. From its obvious affinities the work is within the scope of the department of English.

The technique of report writing includes some rather interesting details. Engineers must have a problem to attack and this is true concerning these literary exercises. The problem is first to be solved and then a report prepared about it. The Tech method of preparing this report consists in determining carefully what facts are to be set forth, and this may or may not be accomplished by a preliminary outline on paper. Then the report is considered from two points of view, one of them the magazine article or popular presentation, and the second, a more concise story, in which details are included in appendixes that the report itself may be the

more direct. It is intended to convey the facts, to state why the conclusion is what it is and to put the discussion of the subject in comparatively little space.

Some of the problems that are given to the young men for discussion and reports are very practical. First of all the students have been required to write an application for a job, telling why they are individually qualified to have it. Next they were given a letter purporting to be from a chauffeur who had saved some money and would like to start an auto-truck sight-seeing business. The students, as engineers, are to weigh the different aspects of the matter, competition, demand, condition of business in general, and report whether the chauffeur should go into this business.

Next and of great interest is the problem, "What are the benefits of the new nickel collecting machine in the subways?" The students have looked into the matter for themselves, and their reports will convey the fact that 80 per cent. of the passengers into the subway have their own nickels, and the company saves the former expense of changing it for a ticket. They have also to report on the expediency of establishing similar collecting boxes at other stations, Copley Square, for example.

Still another problem was preceded by a lecture, by Professor W. K. Lewis, '05, on the dye situation in this country. It was then assumed that the directors of a little factory wish to stop their present manufactures and make dyes. The young men consider the dye situation, the value of the present business, the cost of the change, the decrease in the value of present machinery, and make reports as of an expert to the board.

Then again, and coming back to the Institute, the students, for one of these exercises, are to report to President Maclaurin with reference to a blue-print outfit for the New Tech.

These examples serve to show the general nature of the study. The reports are examined and criticised by the professors and the exercise is one in which some eighty of the juniors are engaged during the present term. The study strikes directly at what has evidently been a weak point in the efficiency of engineers, who in general are constantly at work in matters of greatest public interest, but on the other hand have hitherto received but a fraction of the publicity which should be their due.

ACT THAT INCORPORATED THE INSTITUTE

The Prefatory Report was written by President Rogers as was probably the Act itself

The Institute has in its possession an original copy of House Bill 171, Commonwealth of Massachusetts, authorizing the incorporation of Technology, with corrections in President Rogers' handwriting. It is of much historical interest and we print it here as a matter of record.

HOUSE—No. 171.

COMMONWEALTH OF MASSACHUSETTS.

HOUSE OF REPRESENTATIVES, March 19, 1861.

The Joint Standing Committee on Education, to whom was referred the Memorial of the Associated Institutions of Science and Arts, asking for a charter for the Massachusetts Institute of Technology, and petitioning for a grant of Back Bay lands in a continuous space, for the uses respectively of said Institute, of the Boston Society of Natural History, and of the Massachusetts Horticultural Society, have considered the same, and respectfully

REPORT

as follows:—

The memorialists, representing various associations devoted to manufactures, the mechanic arts, commerce, agriculture, natural science and public education, have had repeated hearings before the Committee, in which they have presented orally and by printed documents a full and comprehensive account of the objects and plans of the before-mentioned institutions as bearing on the material and educational interests of the Commonwealth, and have submitted a variety of evidence to illustrate the effect of the proposed grant in augmenting the value of the adjacent lands.

Looking to all these considerations the memorialists urge that the institutions in question are doubly entitled to the legislative coöperation; first, from the great benefits which they are calculated to confer on the education and industry of the State, and

HOUSE....No. 171.

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ACT INCORPORATING THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

On the first page, in President Rogers' handwriting, are the words "Written by W. B. R."

secondly, from the circumstance that these valuable results will be secured, either wholly without charge upon the treasury of the Commonwealth or by an expenditure quite insignificant in comparison with the benefits attained.

As regards the petition for a charter for the Massachusetts Institute of Technology, empowering it to carry into effect the plan of a Society of Arts, a Museum of Arts, and a School of Industrial Science, your Committee believe the objects of the institute to be of the highest moment to the material and educational progress of the State, and are moreover satisfied of the sincere purpose and ability of those concerned in the enterprise to carry it into successful operation. They therefore recommend that the charter prayed for be granted.

In relation to the assignment of Back Bay land for which the memorialists pray, your Committee would state that the petitioners referring to the plan of the territory adopted by the commissioners in 1857, ask the State to set apart and assign to the use of the Boston Society of Natural History and the Massachusetts Institute of Technology the first section of land lying west of Berkeley and between Newbury and Boylston Streets, extending to Clarendon Street, the former society to occupy about one-third and the latter the remaining two-thirds of this section. They further ask that the next section of land lying west of Clarendon Street in the same range be set apart for the use of the Horticultural Society, for ornamental planting and for the erection hereafter of structures suited to the wants of the society and to the decoration of the grounds.

Your Committee need not enter into details relating to the organization, objects and future purposes of these several institutions; especially as the printed documents prepared with the view of giving full information on these subjects have been for some time in the hands of the legislature. Restricting ourselves to a few prominent statements in this connection, we would briefly mention certain facts and views which the memorialists urge as entitling these societies respectively to the countenance and assistance of the State.

Referring first to the Boston Society of Natural History, it appears that this institution, now in existence more than thirty years, has been greatly instrumental in creating and extending a taste for scientific studies and researches throughout the com-

munity; that it has made valuable contributions to natural science, especially as regards the geology and natural history of the State; that it is yearly furnishing additions of acknowledged value to scientific literature by its published journal and proceedings; that it has accumulated a rich and varied collection of objects from the mineral and organic worlds, and a library of more than 5,000 volumes, embracing works of great value for scientific references, and that its museum, freely opened to the public once a week, is largely visited by teachers and their schools, and is recognized as an important means of general instruction. Your Committee are further informed that in these efforts to advance the natural sciences and the cause of popular education, the society, with the exception of a grant of \$1,500 spread over five years, has never asked or received pecuniary aid from the State, but has been dependent wholly on the enthusiasm of its members and the occasional munificence of individuals.

The memorialists represented in behalf of this society that the present building in Mason Street, is quite too small for their rapidly increasing collections, besides being otherwise unfit for the purposes for which it is used, and they urge that by the erection of an ample structure specially adapted for their objects, they will be able to make their labors and instructions more extensively useful to the public, at the same time that they secure for themselves a more efficient equipment for those researches by which they may enlarge the boundaries of knowledge. It is moreover represented as a part of their plan, in the event of the success of their present petition, to carry out a system of lectures provided for in their constitution, so as to offer to teachers of the common schools and others seeking such knowledge, stated instruction in subjects connected with natural history.

In reference to the Institute of Technology, your Committee have been furnished with full information through the oral statements of the memorialists and the printed documents already alluded to, in which is set forth the objects and plan of the Institute, and the history of the steps thus far taken in its organization.

As regards the public benefits to be anticipated from it, the memorialists represent, that such an institution in its three-fold character of a society of arts, a museum of arts, and a school of industrial science, would be largely conducive to the progress of the industrial arts and sciences throughout the Commonwealth,

and while thus adding to the material wealth of the State, would form a supplement to our educational system of great importance in its influence upon the intelligence and morality of the community, and especially of the industrial classes.

They urge that in the existing competitions of manufacturing, commercial, and agricultural pursuits, such a special training in practical science has become indispensable if we would hope to maintain a prosperous career amid the busy enterprises and inventions of the leading European nations.

They cite in favor of the plan the example of England, France, and other states eminent for their progress in industry and applied science, and argue from the general spread of elementary knowledge among ourselves and from the peculiarly practical genius of our people, that we are most favorably placed for reaping the advantages of such an institution, and for drawing the richest profits from its teachings as applied in the fields of commerce and the arts.

Looking to the educational bearings of their plan the memorialists urge the great value to the public of each of the three departments of the Institute. They represent that the society of arts will be the means of evolving and stimulating the already skilled and cultivated practical talent of the State; that the museum of arts will offer a large treasure of knowledge for the instruction of the general public and for the guidance of all who are devoted to practical science and industrial pursuits, and that the school of industrial science, while providing a systematic training in the applied sciences and arts of design, for its regular students, will open the instructions of ample lecture rooms to the large class of artisans, merchants and others seeking for such teachings in practical science as they can acquire in the intervals of labor and without methodical study.

In this connection they dwell particularly on the fact, that the Institute will fill an important gap in the present educational plans of the Commonwealth, by supplying the industrial classes with the knowledge and training of which they are specially in need, and which could not be effectually provided in any of the existing institutions of the State.

They also urge that the facilities for the acquisition of practical science, thus provided by the Institute, being of a nature to attract large numbers of teachers to the museums and lecture-

rooms, will conduce to more thorough practical teaching in the common schools; and they add that it is proposed to have a certain number of lectures every year specially arranged for the benefit of persons of this class.

In evidence of its connection with the industrial and educational progress of the State at large, the memorialists further represent that the Institute, as thus far organized, embraces in its list of more than two hundred members, persons from different sections of the Commonwealth, and belonging to almost all the active and professional pursuits; and they state that it is contemplated in the plan of the Institute to encourage the formation of local societies of arts in the different towns of the Commonwealth, whose correspondence and interchange with the central institution in Boston may carry the working activities of the latter into every part of the State, at the same time that they help to enrich its museums, and add to the practical efficiency of all its departments.

In regard to that portion of the petition of the memorialists which relates to the application of the Horticultural Society for the adjoining westerly square, the Committee unanimously came to the conclusion that there was no immediate urgency in their case, and as there is a doubt existing in some minds as to the propriety of making the grant, it was deemed advisable to dismiss this branch of the petition, and leave it to future developments for legislative action, should it be desired.

Your Committee have made careful inquiry in relation to the ability and readiness of the several societies to occupy and improve the proposed grant of land, and otherwise to carry into effect the purposes professed by them. They learn that the Boston Society of Natural History has lately received an important addition to its resources, which, with its previous means, will place it in a condition to erect a commodious and handsome edifice for its accommodation on the grounds in question, and that the society will be in readiness to begin building as soon as it shall be authorized to occupy the land.

In regard to the Institute of Technology, the memorialists represent that it is proposed by this society, as a guarantee to the State, to agree to raise a sum of \$100,000 for their appropriate purposes before entering on the granted land. They further state that they have already received earnest intimations, conditional on this grant, of a munificent endowment to be devoted to the

School of Industrial Science, and of a liberal appropriation from a different quarter for building purposes; and they express the fullest confidence in their ability to secure adequate means for entering effectively on the educational and other plans of the Institute.

After a full consideration of what is above briefly reported as to the character and prospective influence of the several institutions represented in the memorial, and as to their ability to carry out the purposes professed by them, your Committee have been satisfied of the substantial basis of their plans and of the great benefits to be conferred by them on the industry and education of the Commonwealth.

Before, however, making up a conclusive opinion on the petition of the memorialists, they have felt it their duty to inquire carefully into the bearing of the proposed grant in a financial point of view, and have sought to ascertain to what extent, if any, this grant would operate to diminish the receipts otherwise accruing from these lands to the school fund of the State.

According to the plan of the memorialists, sufficient space is to be reserved to leave wide openings around the buildings of the societies, while the form of the proposed reservation is such as to make the aggregate of lots fronting its sides equal to the area of the reservation. Common experience shows that such open ornamental grounds surrounding the buildings, together with the attractive exterior of the latter, could not fail to increase the value of the adjacent lands, and to this extent would reimburse the treasury for the space withdrawn from sale. As regards the amount of this enhancing influence your Committee have been furnished by the memorialists with a large array of facts derived from the sales of lands on the Back Bay and other open parts of the city, going to show that improvements of the kind contemplated have been found in every case not only to hasten the sale and occupation of the adjacent lands, but to add very largely to their market value, making the net proceeds of the adjacent lands in most cases as great or even greater than the value of the total area supposing no such reservation to have been made. These results, moreover, have been reinforced by the statements of experienced architects, builders and dealers in real estate in Boston, as well as by the testimony of the superintendents of city lands in Boston and in New York.

Whatever opinions may be entertained as to the extent of this enhancing influence in the case of the present proposed grant, your Committee are convinced that it would reach such an amount as to leave but a slight deficiency in the entire proceeds of the lands, if indeed it should not completely cover the value of the reserved tract, and thus secure the treasury entirely against loss.

But your Committee are unwilling to rest their conclusions as to the prayer of the petitioners wholly or even chiefly on the ground here presented. They see in the plans and purposes set forth by the memorialists the assurance of great and increasing benefits to the general education as well as the industry of the community, and regarding such aims as eminently entitled to the favor of the State, they believe that the public advantages contemplated in the plans proposed would be wisely purchased even by a share of the direct bounty of the Commonwealth.

Such, however, is not the kind of aid craved by the petitioners. The land for the use of which they apply, has already indirectly and in part at least been dedicated to public education. They do not propose to withdraw it from this object, but on the contrary to give it a new and vastly increased value for educational purposes. The character and extent of their plans, as well as their formal assurances to this effect, show that in carrying out their objects they will bring together in the services of education on the proposed grant, a wealth of funds and of all the machinery of practical instruction, far exceeding the entire money value of the land, and compared with which the dividend accruing from it to the school fund when applied in the same service, would be utterly insignificant.

In view of these facts and considerations, your committee are in favor of granting the prayer of the memorialists to the extent and according to the conditions of the following bill.

W. BATTLES.
M. BRIMMER.
SAMUEL T. WARD.
JOHN Q. HAMMOND.
JAMES W. CLARK.
SAMUEL OSGOOD.

HOUSE—No. 171.

1861, Chap. 183.

COMMONWEALTH of MASSACHUSETTS.

In the Year One Thousand Eight Hundred and Sixty-One.

AN ACT

To incorporate the Massachusetts Institute of Technology, and to grant aid to said Institute and to the Boston Society of Natural History.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows:—

SECTION 1. William B. Rogers, James M. Beebe, E. S. Tobey, S. H. Gookin, E. B. Bigelow, M. D. Ross, J. D. Philbrick, F. H. Storer, J. D. Runkle, C. H. Dalton, J. B. Francis, I. C. Hoadley, M. P. Wilder, C. L. Flint, Thomas Rice, John Chase, J. P. Robinson, F. W. Lincoln, Jr., Thomas Aspinwall, J. A. Dupee, E. C. Cabot, their associates and successors, are hereby made a body corporate by the name of the Massachusetts Institute of Technology, for the purpose of instituting and maintaining a society of arts, a museum of arts, and a school of industrial science, and aiding generally, by suitable means, the advancement, development and practical application of science in connection with arts, agriculture, manufactures and commerce; with all the powers and privileges, and subject to all the duties, restrictions and liabilities, set forth in the sixty-eighth chapter of the General Statutes.

SECT. 2. Said corporation, for the purposes aforesaid, shall have authority to hold real and personal estate to an amount not exceeding two hundred thousand dollars.

SECT. 3. One certain square of State land on the Back Bay, namely, the second square westwardly from the Public Garden, between Newbury and Boylston Streets, according to the plan reported by the commissioners on the Back Bay, February twenty-one, eighteen hundred and fifty-seven, shall be reserved from sale forever, and kept as an open space, or for the use of such educational institutions of science and art as are hereinafter provided for.

SECT. 4. If at any time within one year after the passage of this act, the said Institute of Technology shall furnish satis-

factory evidence to the governor and council that it is duly organized under the aforesaid charter, and has funds subscribed, or otherwise guaranteed, for the prosecution of its objects, to an amount at least of one hundred thousand dollars, it shall be entitled to a perpetual right to hold, occupy and control, for the purposes herein before mentioned, the westerly portion of said second square, to the extent of two-third parts thereof, free of rent or charge by the Commonwealth, subject, nevertheless, to the following stipulations, namely: persons from all parts of the Commonwealth shall be alike eligible as members of said institute, or as pupils for its instruction; and its museum or conservatory of arts, at all reasonable times, and under reasonable regulations, shall be open to the public; and within two years from the time when said land is placed at its disposal for occupation, filled and graded, said institute shall erect and complete a building suitable to its said purposes, appropriately enclose, adorn and cultivate the open ground around said building, and shall thereafter keep said grounds and building in a slightly condition.

SECT. 5. The Boston Society of Natural History shall be entitled to hold, occupy and control, for the objects and purposes for which said society was incorporated, and which are more fully set forth in its constitution and by-laws, the easterly portion of said second square, to the extent of one-third part thereof: provided, that the said society shall, within two years from the time when said portion of land is placed at its disposal for occupation, filled and graded, erect a building suitable to said objects and purposes, and appropriately enclose, plant and adorn the open ground around said building, and shall thereafter keep said grounds and building in a neat and ornamental condition.

SECT. 6. The rights and privileges given in the last two sections, are granted, subject to these further conditions following, namely: All buildings whatsoever, which may be erected by either of the herein named institutions upon any portion of said second square, shall be designed and completed, the grounds surrounding said buildings enclosed, laid out and ornamented, and the said buildings and grounds kept and maintained in a manner satisfactory to the governor and council; and, in case either of the said institutions shall, after due notice given, neglect to comply with the requirements of this section, or fail to use its portion of said square, or at any time appropriate said portion, or any part thereof,

to any purpose or use foreign to its legitimate objects, then the right of said delinquent institution to the use, occupation or control of its portion of said square shall cease, and the Commonwealth, by its proper officers and agents, shall have the right forthwith to enter and take possession of the portion of land so forfeited.

SECT. 7. The above named societies shall not cover with their buildings more than one-third of the area granted to them respectively.

SECT. 8. The commissioners on the Back Bay are hereby instructed to reserve from sale the lots fronting on said square on Boylston, Clarendon and Newbury Streets, until said societies shall, by enclosure and improvements, put said square in a sightly and attractive condition.

SECT. 9. Upon the passage of this act, the governor, with the advice and consent of the council, shall appoint three disinterested persons, who shall appraise the value of all the lands specified in the third and eighth sections of this act, and make a return of said appraisal to the governor and council; and if when the lands mentioned in section eight shall have been sold, the proceeds of such sales shall not be equal to the whole amount of the appraisal above mentioned, then the societies named in this act shall pay the amount of such deficit into the treasury of the Commonwealth, for the school fund, in proportion to the area granted to them respectively.

SECT. 10. This act shall be null and void, unless its provisions shall be accepted within one year, by the Massachusetts Institute of Technology, and the Boston Society of Natural History, so far as they apply to those societies respectively.

House of Representatives, April 8, 1861

Passed to be enacted. JOHN A. GOODWIN, *Speaker*.

In Senate, April 9, 1861

Passed to be enacted, WILLIAM CLAFLIN, *Pres.*

April 10, 1861. Approved, JOHN A. ANDREW.

DEDICATION REUNION CHIEF TOPIC

Local Alumni Associations making arrangements to attend the Convention in Boston June 12-14—Much activity among the clubs.

TECHNOLOGY CLUB OF FALL RIVER.—When the Technology Club of Fall River was founded a year ago it was the sentiment of the members that inasmuch as many of the Tech men in Fall River were directly interested in civic betterment, the club should devote a large part of its energy to giving such assistance to the municipality as the education of the Tech graduates afforded.

On December 2, the Technology Club had a notable meeting at the Quequechan Club. The object of the meeting was to discuss the suggested plan for improving conditions along the Quequechan River, and there were represented Mayor Kay, Aldermen Lannigan, Gray and Draper, Commissioners Coughlin, Sullivan, Haffenreffer, Hawes, Brunelle and Kelly, Supt. John W. Moran, Registrar J. J. Kirby, John T. Coughlin, counsel for the Reservoir Commission, and Professor E. K. Barrows, consulting engineer. In addition to the Tech men present, there were a number of prominent citizens who had been invited to hear the discussion.

Joseph E. Nute, '85, presided over the meeting, and many of the speakers were Tech men. Among them was R. F. Haffenreffer, Jr., '95, who delivered the principal address entitled "The Water Supply of Fall River." The discussion of the paper was started by Attorney R. P. Borden, '86.

The meeting was a very important one for Fall River, and emphasized the service that Tech men can give to their municipality.

The character of the work that is being done by the Fall River association is commended to other Technology clubs throughout the country, especially just now when service of this kind is of particular importance.

THE TECHNOLOGY CLUB OF SPRINGFIELD.—The Technology Club of Springfield (Mass.) celebrated the first anniversary of the organization of a local alumni association there December 14, on the day of the blizzard that destroyed the greater part of the steam and trolley railroad communication in the western

part of the state. Nevertheless about forty members of the club assembled at the Worthy Hotel to greet President Maclaurin on his first visit to Springfield since the site was offered to the Institute in 1911.

Frederic W. Fuller, '96, president of the club, acted as toastmaster, and during a brief business meeting, which preceded the dinner, George W. Hayden, '95, was made representative of the association on the Alumni Reunion Committee, and Frederic W. Fuller, '96, was made representative on the Alumni Council.

President Maclaurin was introduced by President Fuller, and in an excellent address he paid high tribute to the loyalty of the Springfield alumni who had been of the greatest assistance to the Institute at a time when such assistance was doubly welcome. He referred to the offer of a beautiful site to Technology on the occasion of his last visit, and he showed the influence that this offer has had on the material affairs of Technology.

The President then reverted to the history of the site, recalling the financial condition of the Institute at the time when it decided to move, and when the largest amount of land it felt warranted in contemplating was about twenty-five acres. Since that time the Institute has received an appropriation of \$100,000 a year from the state, the land has been bought and paid for, and the buildings now being erected will cost millions of dollars. There is much to be done for which there are no funds available, but he said if he could have half a million dollars the work could be completed.

He spoke of the serious effort which is to be made to secure money to finish the Walker Memorial. He said the Alumni Fund was gratifying in many respects, but in others it was disappointing, inasmuch as a very large number of the alumni were not among the contributors. He stated that in the fund raised by the Worcester alumni 90 per cent. of the graduates had contributed. He spoke of the very great influence of alumni gifts on donors who are not alumni of the institution.

The great importance of the Institute at this crisis in the history of the world was shown by the President, because one result of the war will be the organization of business in the United States on a scientific basis, not in a sporadic way but as a national movement. It is particularly fortunate for the Institute that at this important time it is to have laboratories with such wonderful facilities, that

it has a large staff of eminent professors, and a full quota of students. We must look to such institutions as Technology to solve the world's problem, which is now being promulgated.

Technology, he said, stands for a spirit of scientific research on which the world is more and more dependent. The war in Europe is forcing the various countries to organize business along scientific lines. The enterprises now carried on abroad by English and German capital must, if carried along at all, be continued with American capital. He referred to the great American International Company, which has recently been formed in New York with a Tech man, Charles A. Stone, '88, at its head, and of the demands that this and other similar interests will make on minds skilled in scientific matters. We shall need engineers trained in an unprecedented way for these objects, he said, and the very immensity of this foreign business will produce within the country itself a trade impetus that will still further add to the demand.

Field Manager Litchfield, '85, of Boston, who was present, described the plans for the Grand Alumni Reunion June 12-14, 1916.

As a result of the President's speech and the interest exhibited by the members present, Springfield will make a very determined effort to help secure funds for properly erecting the student club building in memory of General Francis A. Walker.—*George W. Hayden, '95, Secretary-Treasurer, 283 Worthington St., Springfield, Mass.*

NORTHWESTERN ASSOCIATION OF THE M. I. T.—The Northwestern Association has taken up again the system of having weekly speakers at their lunches, which was discontinued during the summer months. Mr. John L. Shortall, '87, was the speaker for October 19, his subject being "The Conservation of Animal Energy." Mr. Shortall is president of the Humane Society, as well as a legal light, so that he knew his subject and presented it in a very interesting manner. Mr. Frederick K. Copeland, '76, was the speaker for October 26, and gave us a short talk which was much appreciated, along the general lines of Tech men taking more interest in their fellow men as compared with their jobs. On Tuesday, November 2, we were greatly privileged by having with us Mr. Henry Horn, '88, of Boston, the president of the Alumni Association, who brought us the latest news from Boston. There was a considerable preponderance of '87 and '88 men who turned out to greet their old friend and fellow student.



DINNER OF THE TECHNOLOGY CLUB OF CHILE

From left to right: Frank Osborne, '11, Angus R. Hammond, '12, John Bray, '12, Artemio Gutierrez, John P. Chadwick, '07, Edmund G. Brown, '15, William S. Conner, '14

IMPORTANTE

A LOS ESTUDIANTES DE CHILE

EN LA

FACULTAD DE INGENIERÍA Y MATEMÁTICAS

deseosos de adquirir la más alta educación en los ramos indicados, **The Technology Club of Chile**, hace el anuncio siguiente:

1) **THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY** y cuyo aviso está publicado en la página del frente es una de las Escuelas de Ingeniería más conocidas en los Estados Unidos, con una reputación mundial.

2) Los Estudiantes matriculados este año ascienden al rededor de **1,800**. El cuerpo docente está compuesto de **300** profesores e instructores especialmente elegidos de modo que cada estudiante recibe la más esmerada atención. Entre los Estudiantes hay 150 procedentes de los países de América del Sur y Central, Europa, Japón y China.

3) Los cursos de Minería y Metalurgia son muy renombrados, y cuyo director, por muchos años, ha sido el Dr. Roberto Hallowell Richards, uno de los profesionales más notables sobre el tratamiento de minerales.

4) El Dr. Richards, en merecimiento de sus importantes estudios, acaba de ser premiado con la medalla de oro anual, otorgada por la Sociedad de Minería y Metalurgia de los Estados Unidos.

Los laboratorios en los departamentos de mecánica, química y minería están entre los mejores equipados e instalados de todo el mundo.

5) Los graduados de nuestra Escuela alcanzan casi a **10,000** esparcidos en todas partes del mundo y unidos entre sí por medio de 50 Clubs Sociales.

A estos Clubs, tenemos que agregar el de "**The Technology Club of Chile**", Ingenieros de Minas, actualmente en el servicio de la Braden Copper Co. en "El Mineral del Teniente".

6) Uno de los objetos de **The Technology Club of Chile** es el de ayudar a los Estudiantes de Ingeniería de Chile para suministrarles los detalles necesarios con respecto a las condiciones de la matrícula vigente, de los varios cursos y de los programas de estudio, honorarios, etc.

7) El Secretario de **The Technology Club of Chile** es **Don Ricardo Goodwin**, c/o. **Braden Copper Co., Rancagua** a quien los interesados pueden dirigirse.

The speakers for November 16, 23, and 30 are indicated on a four-page card, as follows: November 16, Henry H. Wait, '91, "Steam Turbine Construction"; November 23, Charles W. Pendell, '98, "A Central Station and Its Customers"; November 30, Thomas M. Lothrop, '95, "Metal Equipment for Factories." This card illustrates our latest attempt to keep up interest in the weekly luncheons. The idea is to print them up with a list of speakers for about a month ahead, and then mail them once a week, so that the men will receive them on Monday and carry them throughout the week, using the inside pages for entering business engagements and other memoranda.

We are planning to have our annual election in January. The election here, as elsewhere, will be of unusual interest this year, in view of the necessity of choosing officers to represent the association at the reunion in Boston next June.—*George B. Jones, '05, Secretary, 1445 Monadnock Block, Chicago, Ill.*

TECHNOLOGY CLUB OF CHILE.—The Technology men in Chile got together last June and formed the Technology Club of Chile with the following charter members: W. L. Stevens, '00, J. P. Chadwick, '07, R. F. Goodwin, Jr., '10, Franklin Osborn, 2d, '11, J. L. Bray, '12, W. S. Conner, '14; since that time, A. R. Hammond, '12, E. G. Brown, '13, Frank T. Smith, '13, Robert A. Schmucker, '08, Pelayo Chinchilla-Kirkpatrick, '11, and Artemio Gutierrez, a student who was unable to return to the Institute this year but who intends to continue and finish his course.

Several meetings have been held, and on October 23, occurred the first annual banquet, which was held in Santiago. The crowd left Sewell at 5.30 a. m. arriving in Santiago at 11.00 p. m., and had breakfast with the president, dean and head of the Mining Department of the University of Chile as guests. The afternoon was spent in sight-seeing about the city. The banquet in the evening was held in the Santiago restaurant, and the following officers were elected: W. L. Stevens, '00, president, J. L. Bray, '12, secretary. Mr. Gutierrez was made press agent. It was planned to give the Chilian newspapers interesting facts about Technology, and of the Technology Club of Chile, so that the readers may know something of the work that is being done at Technology.

The photograph printed herewith was taken at the banquet. Those who could not attend sent letters. The Technology Club

of Chile is one of the most loyal organizations in the alumni list.—*J. L. Bray, '12, Secretary, Braden Copper Co., Rancagua, Chile, S. A.*

THE CINCINNATI M. I. T. CLUB.—On November 22, I. W. Litchfield, '85, visited Cincinnati on his way from Indianapolis, where he attended the "Get-together Meeting" of Indianapolis, Dayton, O., Louisville, and Cincinnati associations. The meeting at Indianapolis was extremely interesting and enjoyable to all, and those that went from our city were greatly impressed with the way the meeting was handled, and we take this opportunity of expressing the fact. Those that went on were Messrs. A. H. Pugh, Jr., '97, M. W. Rew, '09, H. S. Morse, '03, John Hargrave, '12, and Stanley Hooker, '97. Let us hope that the future will bring the local organizations together quite often, and all meetings to be as successful as that which the I. A. M. I. T. engineered. Mr. Litchfield, upon arriving in Cincinnati, brought us the happy news that an association had been started the night before in Louisville. Bully for the Kentucky Colonels! Mr. Litchfield then had luncheon with us at the Metropole Hotel telling us all about the progress of the new buildings, and showing us some remarkable photographs thereof. He also told of the activities in Boston, at present, and those planned for the future, especially of the grand reunion in June, 1916. Raynor Allen, '10, has been appointed our representative on this special feature, and surely, with a live man like Ray, we ought to have some stunts, as well as a large number to attend. Those at the luncheon were: Messrs. I. W. Litchfield, '85, R. W. Procter, '94, Stanley Hooker, '97, Robert Anderson, '11, A. H. Pugh, Jr., '97, H. S. Morse, '03, S. M. Manley, '00, Raynor Allen, '10, Robert Andrew, '01, Stuart Miller, '07, F. W. Morrill, '07, H. D. Loring, '07, William Schmiedeke, '12, Edward H. Kruckemeyer, '11, John M. Hargrave, '12, H. M. Lane, '77, E. J. Carpenter, '72, Charles R. Strong, '11, George Cowing, '01. After the food, Hargrave took Mr. Litchfield under his wing (as much as is possible), and they hiked out to John's plant in Norwood, where they got their heads together. Their business either was to "fix" the next election of our club, or to work out some scheme for supplying ammunition to Austria and Germany. The annual dinner and meeting will be arranged for early January, at which time a secretary (among other officers) will be elected who will be able to write volume upon volume for the REVIEW. We have

hopes at least.—*Edward H. Kruckemeyer, '11, Secretary, 111 East Fourth Avenue, Cincinnati, Ohio.*

THE M. I. T. CLUB OF AKRON.—The M. I. T. Club of Akron, during the past year, has continued its activity of the past and has proved to be the most alive of any of the many college alumni associations in the city.

We have enjoyed many good times together, all of which have helped to keep alive a strong feeling toward "The Tech on Boylston Street," and to develop a better and healthier friendship for the college across the river. We have entertained the Harvard alumni chapter and have also enjoyed their hospitality. We are glad to report that the feeling between the two associations is of the very best.

Last July, a party was given at Congress Lake for the Technology Club of Northern Ohio, about sixty members being present, all entering into the various sports with the old-time enthusiasm. The rivalry between the Cleveland and Akron crowds was keen especially in the tennis doubles. This match was finally won by Akron. The Clevelanders, however, were strong in events such as the egg race and golf and barely managed to have the larger total.

The latest activity of the club has been the development of the monthly luncheon. On the first Saturday of every month, special tables are reserved at the University Club dining-room and every Tech man, whether or not a member of the club, is welcome. If any out-of-town Tech man is here on that date he is sure to find a large Tech welcome awaiting him at the club.

During the year, we have had several new members and visits from other alumni. We will be glad to see any alumnus here, either permanently or otherwise.

W. H. Eager, '04, of Whitman & Barnes Manufacturing Company, is president of the club.—*Howard W. Treat, '14, Secretary-Treasurer, Goodyear Tire & Rubber Co., Akron, Ohio.*

THE TECHNOLOGY CLUB OF ST. LOUIS.—On the evening of October 28, the Technology Club of St. Louis held a "Get-together" dinner at Cicardi's restaurant. This was the first meeting of the club since the *Register of Former Students* was distributed in the early summer and many new names were added to the roster. A number of the "new" men were at the dinner, and all proved to be "good fellows." The seating arrangement was made so that

five or six sat at each table which were located on the balcony overlooking the main floor. In this manner we were at once apart from the crowd and had an unobstructed view over all below. Good music and a cabaret continued all the evening and the orchestra played many of the Tech songs, the fellows all joining in the chorus. After dinner we lingered over our pipes—long clay ones, and discussed many things. The meeting broke up about ten o'clock.

Those present were: E. C. Klipstein, '94, W. R. Phemister, '95, C. E. Smith, '00, G. R. Wadleigh, '97, E. C. Little, '98, J. S. Bronson, '01, C. W. Kellogg, '02, A. M. Holcombe, '04, H. L. Lewenberg, '06, E. L. Brown, Jr., '08, J. Desloge, '12, E. A. Downey, '13, T. A. O'Reilly, '13, B. F. Thomas, '13, J. R. Bristow, '14, H. L. Bowman, '14, and C. E. Doud, '14.—*Benj. F. Thomas, Jr., '13, Assistant Secretary, Electric Co. of Missouri, Webster Groves, Mo.*

TECHNOLOGY CLUB OF ROCHESTER.—The sixth annual meeting of the Rochester Technology Club was held October 25, 1915, at the Rochester Club, with twenty-six members present.

W. E. Hoyt, '68, was reelected president for the sixth successive term; B. C. Hopeman, '00, first vice-president; J. F. Ancona, '03, 2d vice-president; W. G. Bent, '05, secretary and treasurer, and F. W. Lovejoy, '94, member of the executive committee for three years.

The club voted unanimously to membership the following men: P. Frank Bonesteele, '94, H. E. Fowler, '10, W. Slayton Wilson, and Kenneth W. Huse, '13. This brings the club membership to fifty-four active members.—*W. G. Bent, '05, Secretary-Treasurer, Kodak Park Works, Rochester, N. Y.*

TECHNOLOGY CLUB OF NEW BEDFORD.—The annual meeting of the Technology Club of New Bedford was held December 2, 1915.

Officers were elected as follows: President, W. A. Robinson, Jr., '97; secretary-treasurer, R. D. Chase, '92; executive committee, the above with I. M. Chace, Jr., '97; representative to Alumni Council, C. F. Lawton, '77.—*Richard D. Chase, '92, Secretary-Treasurer, 607 Purchase Street, New Bedford, Mass.*

DETROIT TECHNOLOGY ASSOCIATION.—On December 13, the association held a dinner at the Cadillac Hotel at which thirty-two members were present. We just missed getting Mr. Henry M.

Waite of the class of 1890, business manager of the city of Dayton, to talk to us and accordingly had to be content with home talent. We fully expect to have Mr. Waite with us on some future occasion.

Plans for the big reunion were discussed and the tentative program for it was read and heartily endorsed. It is quite probable that Detroit will have a good delegation to send to Boston next June. Mr. Kales was authorized to appoint a delegate to represent the reunion committee, and will announce his appointment at our next meeting, which will be in January in honor of Frederic H. Fay, '93, who is coming to talk to the Engineering Society at that time. Mr. Fay will speak on the Boston Metropolitan District.

Two important features with reference to our local Alumni Association were put through at this meeting, which I believe will have a great deal to do with its future. One was a modified guarantor system, whereby minimum dues of \$1 and maximum dues of \$5 are called for,—the money to be obtained by a finance committee. Thus, in this way a man can pay what he is able to and it is expected that sufficient funds will be brought in by this method, so that individual subscriptions will not have to be relied upon.

The other item which was put through was the matter of our having regular noon luncheons. It has taken just about one year of work in this city to bring about the necessary enthusiasm to carry through this proposition, which I now believe will be a regular feature of our organization. We are endeavoring to see if it will be possible to use the Board of Commerce as a meeting place for these luncheons.

Granger Whitney, '87, closed the meeting with a very entertaining talk on farming, which he has taken up as his hobby, spending a great portion of the year at his farm at Williamsburg, Mich. Mr. Whitney thinks that farming is more difficult and requires more persistence and ability than manufacturing.

Those present were: William R. Kales, '92; G. R. Anthony, '98; G. D. Huntington, '98; G. H. Kimball, '73; Frank H. Davis, '04; L. E. Williams, '02; H. H. Ambler, '14; J. W. Case, '88; Herbert S. Lord, '98; Edger Henderson, '13; Herbert D. Swift, '15; Dana H. N. Mayo, '14; F. C. Sutter, '93; George R. Caske, '07; Granger Whitney, '87; J. M. Hastings, Jr., '13; Robert Floyd, '85; A. L. Fischer, '03; M. S. Dennett, '11; Charles L. Weil, '88; E. B. Snow, Jr., '05;

Waldso Turner, '05; R. F. Hill, '10; Kenneth Greenleaf, '11; Henry T. Winchester, '03; E. B. Cooper, '05; O. W. Albee, '93; A. F. Shattuck, '91; Howard T. Graber, '03; Harold W. Barker, '14; D. V. Williamson, '10; Preston M. Smith, '05.—D. V. Williamson, '10, *Secretary-Treasurer, Detroit Edison Co., Whitney Building, Detroit, Mich.*

TECHNOLOGY CLUB OF SOUTHERN CALIFORNIA.—The Technology Club of Southern California is planning a very active season for 1916. Last year, when Merton L. Emerson, '04, passed through Los Angeles, about fifteen Tech men took luncheon together at the University Club and heard the latest news about the Institute from our guest.

October 19, Professor Charles E. Locke, '96, of the Mining Department of the Institute, spent a few days here, and fortunately our representative on the Alumni Council, John C. Chase, '74, was in the vicinity at the same time. Professor Locke had interesting pictures showing some of the new buildings. The following were present at the luncheon: Osgood, '70, Farwell, '87, Wilcox, '87, Knowlton, '93, Hardy, '96, Adams, '03, Cox, '03, Pitner, '03, Morley, '03, Severy, '04, Blake, '06, Leeds, '06, Mayberry, '06, Hampton, '07, Myers, '08, Joslin, '09, Halsey, '10, Breyer, '10, Uman, '12, Jeffers, '12, Hopkins, '13.

On September 27, we were fortunate enough to have Professor Richards, '68, with us for a luncheon, and everybody certainly enjoyed listening to him. Those present at the Richards' luncheon were: Blaisdell, '73, Willard, '76, Farwell, '87, Cooke, '95, Blackmer, '98, Davenport, '06, Parker, '06, Mayberry, '06, Hampton, '07, Clements, '08, Breyer, '10, Tripp, '10, Uman, '12, Jeffers, '12, Annin, '14.

Here in Los Angeles we have an annual institution which is known as the cruise of the Tech Club. This year the cruise took place Saturday and Sunday, September 25-26. Members Uman and Jeffers tendered the use of their seagoing crafts, and the members brought their own blankets, towels and table cutlery. The assistant chef of the University Club attended to the meals. As usual the meeting was most enjoyable. The following members were present: Farwell, '87, Brittain, '93, Benedict, '94, Cox, '03, Parker, '06, Davenport, '06, Mayberry, '06, Clements, '08, Uman, '12, Jeffers, '12, A. S. Nibecker, '16.—*Edward L. Mayberry, '06, President, 470 Pacific-Electric Bldg., Los Angeles, Calif.*

TECHNOLOGY CLUB OF NEW YORK.—On Saturday, December 11, the Technology Club of New York entertained President Maclaurin and Professors H. P. Talbot, '85, and W. H. Walker, and A. D. Little, '85, at luncheon. President Maclaurin spoke on the present conditions at the Institute, and he amused his audience by telling them that he was obliged to take a trip to Europe a few summers ago, when he didn't just want to, to give the impression to some real estate owners in Boston and Cambridge that the “New Site” deal had been completed. The plan succeeded and the Institute was able to purchase its present site at a reasonable figure and build its new educational plant which, including the land, is to cost nearly \$7,000,000.

“Six years ago, when I came to Technology,” said President Maclaurin, “the idea was to have a new plant costing from two to three million dollars, and there was not a cent in the treasury for this purpose aside from the value of the Trinity Place building.” It is very evident to those Tech men who have seen the New Technology that President Maclaurin has worked wonders.

Lester Gardner, '98, is the New York representative of the Reunion Committee which is an earnest of the attendance of every man on the roll. Gardner is in full charge of the arrangements for the New York-Boston special boat which will sail for the Reunion June 11, and he is a little worried to know where he will find a place for everybody.—*Ralph H. Howes, '03, Secretary, 105 West 40th Street, New York City.*

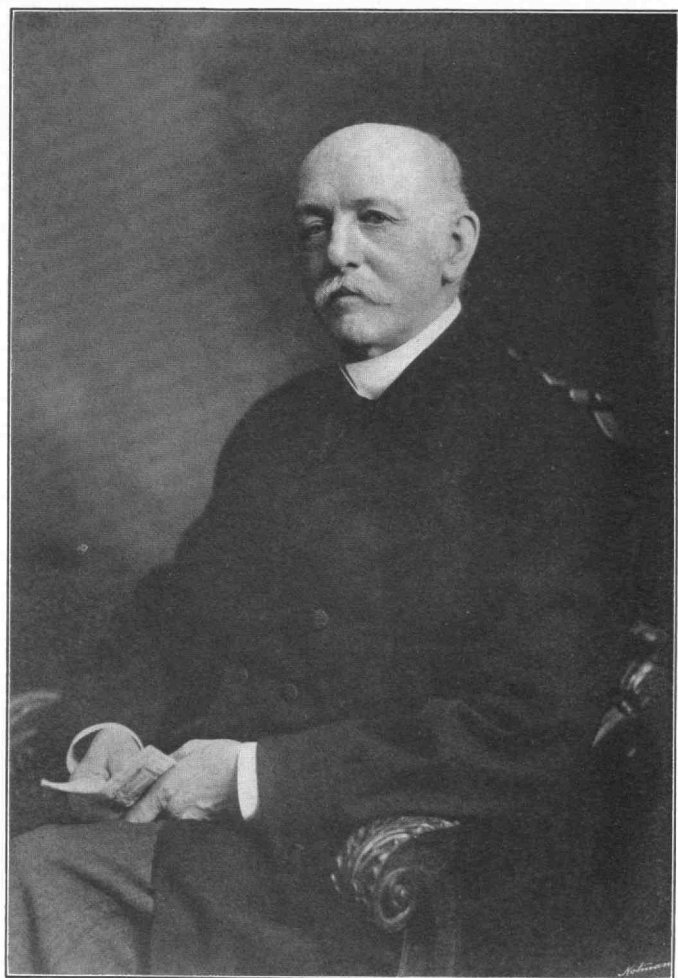
“Pantehnicon”

The official publication of the Reunion Committee will be issued about the first of February. It will be called *Pantehnicon*, and will be full of information about the great event to which we are all looking forward. Please remember that very soon we shall send out blanks asking for the intentions of the alumni with reference to attendance. We need this for our preliminary planning, and we think that as time goes on the yearning to come back to Boston and see the dedication of the wonderful new buildings will influence an immense throng of alumni. *Pantehnicon* will give you full information about all the features of the Reunion. There will be three or four issues.

FRANK WALTER BOLES MEMORIAL

The Department of Architecture has received a gift of \$15,000 from Mrs. Harriet A. Henshaw, of London, sister of the late Frank W. Boles, who was long a resident of Boston. Mr. Boles, it will be remembered, in his will gives to the Institute the sum of \$10,000 as a memorial to his father, to be called the Levi Boles Fund. Mrs. Henshaw makes her gift, which is to be available at once, in memory of her brother, and it will constitute the Frank Walter Boles Memorial Fund. The income of the fund will be devoted to purchasing fine art material suitable for supplementing the instruction in design. The care and preservation of the material is included in the purposes of the gift. The fund will be administered by a committee of three Faculty members of the department of architecture, to be elected annually. This gift should prove most acceptable, since the department's resources for this purpose have been limited.

Mr. Frank Walter Boles was born in Boston, December 5, 1841, and died March 30, 1915. He was the son of Levi and Mary Harding Boles. At an early date his ancestors came from England to New Hampshire, removing subsequently to Massachusetts. His education began with the Boston public school of that day. He preferred not to take a university course, believing that he could advantageously pursue a serious course of study in conjunction with a business career. He accordingly entered mercantile life early, associating himself with his father in the firm of Levi Boles & Son, a pioneer house in Boston for the importation of foreign glass and the sale of manufactured doors and windows. At the age of nineteen he made his first visit to Europe. This was the beginning of a series of trips abroad for study rather than for pleasure, taken at more or less frequent intervals throughout his lifetime. He was a student in the broadest sense, reading widely on historical, scientific and philosophical subjects. He took much interest in architecture, and through his extensive travel was able to gratify his taste in that direction. He was a man of rare intellect and distinguished presence. After a long and successful business career he retired to devote himself to private interests. One of his distinguishing traits was his unfailing courtesy to all



FRANK WALTER BOLES

with whom he came in contact. Being of a retiring nature and not caring for public life, he was not well known outside of business and social circles, but his many privately made and publicly known deeds of charity will be a lasting and fitting memorial to him.

Class Secretaries and the Reunion

The nineteenth annual meeting of the Association of Class Secretaries was held at the Engineers Club, Boston, November 30. The principal matter of business before the meeting was the coming All-Technology Reunion in June.

The secretary of the Reunion Committee gave an idea of the tentative plans and stated that each local association had been asked to appoint one of its members to coöperate with the General Reunion Committee. Each class is to appoint a local representative in the larger Technology centers where there are five or six classmates, to look after the interests of the class, and these men will act as a committee, with the local association representative as chairman. This committee will be useful in arranging about local transportation, etc.

He also spoke of the class stunts which are to occupy not over three to five minutes' time and which should convey some idea—historical or educational, or refer to some well known incident in the Institute or in the class. He asked the classes to coöperate just as much as possible with the Music Committee, which has arranged for a song competition in the hope that we can add some good songs and music to the Tech collection.

Henry J. Horn, '88, president of the Alumni Association and chairman of the Committee on Transportation, then told of the arrangements he hoped to make for a special boat from New York to Boston.

There was a discussion in regard to the proper time to hold class dinners, and it was decided that Monday night, June 12, would be the best night for this purpose. A committee consisting of F. A. Wilson, '91, chairman, A. A. Blanchard, '98, and C. W. Whitmore, '08, was appointed to arrange for the class dinners. These will probably be located in the City Club, the Bellevue, Young's and the Parker House as these locations are near together and are convenient to the City Club where the smoker will be held in the evening.

BEGINNINGS OF THE ADVISORY COUNCIL

How the germ of intra-mural athletics was planted at the Institute

The Alumni Advisory Council has filled a very useful and helpful position during the latter years of the Institute's history. Its beginning was the beginning of a direct helpful interest in student activities in several lines. The first idea originated on broader lines than athletics and comprehended the general subject of physical education. Mr. Hermann J. Boos, instructor in gymnastics and for a time adviser in matters athletic, felt that he needed the strong influence of the Corporation, Faculty and alumni in the upbuilding of the gymnastic and athletic work so as to benefit an increasing number of students. He endeavored through some of his former pupils to bring this about. The writer became inoculated with the idea and was convinced that the time was ripe.

Interviews with a number of representative and influential Technology men resulted in a meeting being called for 7.30 p. m., Monday, March 15, 1897, at the Technology Club on Newbury street. Invitations to attend this meeting were extended to a selected few who could be reached in the brief time available either by personal visits or by letter. The following is a copy of one of the letters sent out:

THE TECHNOLOGY CLUB.

BOSTON, Mar. 12, 1897.

MR. JOHN R. FREEMAN,

Dear Sir:

The fact that the gymnasium of the Institute, and many matters connected with it—the whole question of physical education in fact—are sadly in need of attention has been well brought out by the last report of the Alumni Association (1897), as well as in other ways. In order to remedy the present state of affairs, it has been proposed to establish an advisory board from among the members of the Corporation, the Faculty and the alumni, whose duty it shall be to take an aggressive interest in all matters pertaining to physical training at the Institute. The eagerness with which the suggestion was met by some members of the Faculty and by alumni and undergraduates leads to the conclusion that it would be a step in the right direction. In order to discuss more fully the advisability of such a measure, or granting that, to formulate plans which will lead to decisive results, a prelim-

inary meeting has been arranged for on Monday, March 15, at 7.30 p. m. in the Technology Club house.

It is urgently hoped that some suggestion or encouragement may be received from you either by letter or by being present at the meeting if possible.

Very truly yours,

R. E. BAKENHUS.

Mr. Freeman was unable to be present but responded with an encouraging letter. Professor Dewey, Dean Burton, Professor Sedgwick, Dr. J. A. Rockwell, '96, Maj. F. H. Briggs, '81, and others were present at the meeting. Some cold water was thrown on the proposition in expressing the fear that the movement might appear as usurping some of the powers of the Corporation or the Faculty. Such a pitfall was, however, carefully avoided. It soon became apparent that the athletic interests would be predominant in the movement. A permanent organization was formed by appointment of a committee which later resulted in the establishment of the advisory council of athletics.

It would be of interest if the history of this and allied alumni enterprises might be carried further by those familiar with their development.

R. E. BAKENHUS, '96.

M. I. T. Tile Calendar

Jones, McDuffee & Stratton of Boston have had made for them, by the old Wedgwood Pottery in Staffordshire, a tile calendar for 1916, which has on the reverse side a view of the Institute of Technology, showing the new buildings now being erected.

This is the first souvenir of this sort that has come to our attention, although it is likely that in the future the Institute will be the subject of many such tokens.

Tech Doctor's Degrees

In the list of American doctorates published in *Science* October 22, occur the names of Francis Briggs Silsbee, '10, his thesis being "The Geology of the Walker Mountain Overthrust Block in South-western Virginia"; also Edward Chace Tolman, '11, "Studies in Memory"; Leonard Thompson Troland, '12, "Studies of Visual Equilibria."

TECH LABORATORIES AT SERVICE OF STATE

A striking example of how the laboratories of an educational institution may do good service for the people of the municipality or state is instanced in the recent agreement between President Maclaurin of the Massachusetts Institutes of Technology and Edward F. McSweeney, chairman of the directors of the port, whereby Technology will test the samples of materials to be used in constructing the new dry dock.

So far as the state is concerned, it is the first time that such a matter has been undertaken thus systematically as one undertaking, while on the part of the Institute it is another example of the readiness of this school to use its resources for the benefit of the people. In the past the laboratories of the department of mechanical engineering have, from time to time, furnished the fundamental facts concerning the strength of materials. Tests on full-sized arches and other constructions in brick made at Tech have been the basis on which the earlier laws on building were founded just as the tests in biology and food analysis have been, in Massachusetts, the foundation stones of legislation in these important matters.

In his correspondence with Mr. McSweeney, Dr. Maclaurin has made plain the position of the Institute, which he says will be glad to place its equipment at the service of the state so far as is compatible with its academic work. "It undertakes this," writes the President, "without any idea of commercial profit, charging for the use of its equipment merely sufficient to cover the actual cost of operation for the tests that will be made."

Of the magnitude of the testing work on so great a construction as the dry dock the public has no adequate idea, but to do this in engineering fashion will require the taking, preparing and testing of somewhere about thirty thousand individual samples. For so large a series the apparatus at Technology is pretty well prepared although it will be necessary to increase the sets of the concrete moulds, for example, and possibly to add another testing machine to the equipment.

Another example of the same kind of aid which the Institute offers to another state department is in the determining of the flash points of inflammable fluids, about which the fire prevention commissioner has made inquiries.

TECH MEN IN THE PUBLIC EYE

CHARLES A. STONE, '88, who has been announced as the president of the American International Corporation to promote foreign trade, is one of the two original members of the firm of Stone & Webster of Boston, Mass., and is one of the most widely known men in the public-utility field. Mr. Stone was born at Newton, Mass., in 1867 and was graduated from the Massachusetts Institute of Technology in 1888, his partner, Edwin S. Webster, being a classmate. Soon after graduation both realized that there was a small, assured field for the consulting electrical engineer, with great possibilities for the technically trained man capable of appreciating business problems, and in 1889 the firm was formed with offices at 4 Post Office Square, Boston, a location close to the financial district. The firm began in a quiet way to lay out wiring, design small plants, calibrate instruments and conduct tests. A small laboratory was soon started as an auxiliary department, with quarters in Fort Hill Square, and a Stone & Webster calibration certificate soon became a recognized standard of merit. In 1891 the firm was retained by S. D. Warren & Company, Westbrook, Me., to lay out a system of electric power transmission for the famous Cumberland Mills. In the early nineties the firm engineered the construction of several generating plants of considerable size in Massachusetts, Pennsylvania and Tennessee. The unsettled financial conditions of this period opened the way for the development of advisory relations with clients in connection with the reorganization, financing, organization and operation of central-station and traction properties until the administration of properties became one of the most important functions of the organization, leading logically to the modern banking phases of the firm's work. Mr. Stone's activities have been so closely interwoven with the development of the firm that no separate consideration seems possible. He is a director in numerous public utilities in different parts of the country, about two score corporations now being under Stone & Webster management, and is a director of the First National Bank of Boston, the Old Colony Trust Company of Boston, a member of the executive committee of the Corporation of the Massachusetts

Institute of Technology, a member of the American Academy of Political and Social Science and other organizations. Mr. Stone has just been elected President of the Alumni Association.

W. F. M. Goss, '79, Dean of the College of Engineering of the University of Illinois, has been much in public print during the last two or three years because of his activities as chief engineer of the Smoke Abatement Committee of Chicago, and also of the electrification of railway terminals, which is a serious problem in that city.

Dean Goss has long been a prominent figure in the field of steam railroading, mechanical engineering and engineering education, to all of which subjects he has made notable contributions. After leaving the Institute he organized the department of practical mechanics at Purdue University. For a long time he was prominently identified with Purdue, occupying the positions of professor of experimental engineering, dean of the schools of engineering and director of the engineering laboratories. While here he coöperated with the steam railroads in making tests of locomotives and of parts of railroad equipment, which work has been continued at Illinois. He recently served as president of the A. S. M. E. and has held numerous other positions in technical societies. He is the author of several books, principally on locomotive topics. At Illinois he was instrumental in establishing the department of railway electrical engineering, which is coördinate with those of railway mechanical and railway civil engineering. These three departments form a special school which has exceptional facilities for this work.

CHARLES HERBERT WOODBURY, '86, the distinguished marine painter, has been assigned an entire gallery at the Panama-Pacific Exposition in San Francisco, for the exhibition of his work. It will be remembered that the Fine Arts section of the Exposition is to remain open until next spring, and in the rearrangement of the exhibits it was decided to honor Mr. Woodbury to this unusual extent.

The Woodbury room will contain a generous selection from his recent oil paintings, with a group of his best watercolors, and a group of his original etchings and drawings. The gallery will be ready now in a few days, and will remain open until May.

Conspicuous among the oil paintings in the Woodbury exhibit

will be the spirited decorative series which the artist first showed not long ago at the gallery of the Guild of Boston Artists, in which schools of sportive porpoises and groups of hardy swimmers are seen sporting and frolicking in the waves. His ten panels of the sea form a sort of Ocean Symphony. Of the set, five are of tropical motives, with porpoises looping the loop; and the remaining five are of seas of greenish hue with figures of swimmers. The Southern pieces are marked by an intensely blue tone, and the sporting, leaping, gliding fish constitute a remarkable expression of the joy of living.

Mr. Woodbury's latest painting, which is now on his easel in the studio, is a powerful representation of a rockbound cove at Ogunquit, where a group of bathers is seen entering the rough surf in the foreground. The tall, steep cliff which fills in the entire background of the composition is very imposing in form and beautiful in color, enveloped as it is in a thin veil of mist which softens its rugosities. Into the cove or bight the great waves are rolling one after the other, and breaking in foam and spray on the ledges at the foot of the frowning cliff.

The etchings which Mr. Woodbury made last summer, and which were first shown at a recent exhibition in the Copley Gallery, have met with an immediate success which is amply deserved. A goodly number of the prints were sold here; and since the Boston show the artist has been invited to make special exhibitions of the etchings at Keppel's Gallery in New York and at the Library of Congress in Washington.

WILLIAM H. KING, '94, assistant corporation counsel of the city of New York, has recently been appointed head of the Department of Taxes in the Law Department of that city. He has been connected with the tax division since his appointment as assistant counsel ten years ago.

Mr. King has been very prominent in Technology alumni matters, especially in connection with the reorganization of the Technology Club of New York, of which he has been both secretary and president. He has served on the Alumni Council and a number of committees of the Alumni Association, and last year he was elected a term member of the Institute Corporation. He was the first president of the Technology Clubs Associated, and it was largely through his efforts that this organization was created.

LETTER TO THE EDITOR

Class of '80 on the Grill—A Woeful Wail from the Woolly West

Of all the magazines that come to the house, *TECH REVIEW* interests me most of all, probably for the reason it tells of the real life of fellow graduates.

But Mr. Editor, one feature of it has pained me. For the past ten years or so, I have turned eagerly to the class of '80 to learn of their distinguished achievements, only to be confronted with that old refrain, "Geo. Hunt Barton, Sec., 89 Trowbridge St., Cambridge, Mass." That is all very interesting, to be sure, and proves at least that Geo. H. is still alive, which is more than can be said of three of the solitary class of '80, who managed to survive William Ripley Nichols' pointed thrusts and the occasional "Cross" looks of dear Prof. Charles R.

Now, Mr. Editor, we are small in number, only five to be sure, but 60 per cent. of them live close by you in Boston, and the burden of my song is can you not get after them with a big stick and let the western members know what's doing. Surely Geo. H. Barton, with his wonderful knowledge of paleontology, could give us some up-to-date information on dry bones; that would be both interesting and profitable also if he would tell us what to put on the bones after they have been picked clean.

Then there is still another George (Hamilton), perched on his high stool in the City Hall Annex. He is the man that guards your sewers and keeps them from running up hill. Can't he inspire us with a yarn telling where under the sun he finds a place for a sewer in Boston's cow paths, now occupied with sub and sub-subways?

If political matters shut off public utterance from this worthy district engineer, then hunt up that affable and manly form of William T. Miller. He will receive you most cordially and perhaps sell you a piano on the side. Why doesn't he write an article for the *REVIEW*? Tell us how many pianos he is shipping into the war zone. This is not meant for any joke for he himself says the Miller piano cannot be beat. You can lay it all off onto me for stirring up this trouble, for I am so far off I cannot be reached except through the press, but if '80 doesn't show up once in awhile, I will come on at the next reunion, and play the part of the "Wild and Woolly West" in getting them busy.

Which reminds me how did I ever happen to forsake Boston's delightful atmosphere and hike for this high altitude? Well, Prof. Henck, peace to his ashes, is responsible for it. He one day forgot his notes and

there was nothing doing; but to "mark time" he dug up a letter received from a former graduate, then in the far West, who wrote of his wonderful success in engineering. He was actually clearing \$10 *per diem* right along. To three of this class of '80, that looked so fine, that the next hour found all three of them at the U. P. ticket office inquiring the rates west. Three of us got the fever, Clark, Small and Chase.

Clark went to the Coeur d'Alenes, and his first job as mine superintendent was to train a husky shift boss. Clark wasn't as big then as he is now and I think the contract wore on his nerves, for he was soon found in partnership with his father in Chicago, growing wealthy on big building contracts. So wealthy that he found it desirable to add 100 lbs. to his anatomy, which gave him a better standing with the city aldermen in his contract work.

Brown, poor fellow, with a head like Daniel Webster, from whom we sought consolation on all unsolvable calculus examples, is responsible for those wonderful grades and curves on Mex. Central R. R. around Zacetacas, but aspiring to greater fields he sought the ministry and before long a fine fellow passed beyond to the better land that he preached about. The undersigned started West the next day after graduating, kept going until he ran up against the big bunker of the Rocky Mountains and concluded he had gone far enough. Finding there was little demand for S.B.'s, he borrowed an "E.M." title and has swung it ever since. Now Mr. Editor, I don't expect you to fill up the January number with all this rambling but I am going to say just this for the benefit of the younger graduates. Namely, in addition to cramming their brains full of calculus *et cetera*, take a course in good "common sense," "good policy," and learn how to rub the fur of your fellow man in the right direction. It will help you over many hard places, and to illustrate, I will briefly tell them about my first "triangulation."

It was in Central City, Colo. A big Irishman came into the office and wanted a mining claim staked off a few miles away. We proceeded to his discovery shaft, in the deep woods, and my first remark was "Jack, what does that wide swath mean cut through the timber, running down to that house a quarter mile distant?" For an answer Jack looked kind of white around the gills and still more so when from the house emerged a brawny man with an axe and his *frau* soon after, and they both acted as if they had urgent business with us. On reaching our immediate presence, she made herself comfortable on a big stump and the defendants very uncomfortable by pulling out a long horse pistol, cocking it and covering us with the gun in a way that expressed more than words. Her name was Trezize.

"Now go right ahead boys and survey that claim, but you better send for the coroner for he will sure be needed," was her first remark. I looked at Jack and he looked at me. We both felt like Gaston and Al-

phonse. After you Alphonse! "What are you going to do about it Jack?" I asked, to one side. Trezize then broke in "Go right ahead boys and we'll put a couple bullets through yees same as old Dick Williams we shot last year" (which was all true).

Says Jack, "I don't like the looks of this; can't you manage to get a good record to file without staking the claim," which gave me an inspiration. Turning to Trezize I said, "How do you know this is on your land anyway?" "The government corner is close beyont," he remarked. "Show it to me," says I. Going to the corner, I set up my tripod and said, "Let's see which way E-W and N-S is anyway." Letting down the needle, I took a sight to a tall pine which I had mentally spotted close to the shaft. Then I said, "Let's measure out the old man's lines a bit." So we measured off 300 feet and I set up again and took another bearing to the aforesaid tree. This stirred up a hornet's nest. "Hey there son, what be thee doing spying through that there compass?" (If you have never heard the true Cornish lingo, you have missed something in life.) Turning to Jack I said, "Oh well, Jack, I guess you don't want anything more to do with this ground, let's go home." I had made my first triangulation, secured all the necessary data to tying the claim to a government corner and making a good record and best of all had preserved my body as well as Jack's for future usefulness. Mr. Editor, I must apologize for this long tale but it merely represents the algebraic sum of the various little items that '80 should have contributed to the REVIEW the past ten years.

Throw it all in the scrap heap if you like but if you do run across Barton, Hamilton or Miller, just tell them if they don't show up once in awhile in TECH REVIEW, I will monopolize the whole edition and pose as the one and only of the few but select class of '80.

EDWIN E. CHASE, '80.

MISCELLANEOUS CLIPPINGS

Boston is about beginning construction of a dry dock, which when completed will be the largest in the United States. Expert advice from Federal engineers and other competent persons has shaped decisions as to site, structure and design. But who will guard the port directors' and the city's interests as the work proceeds, testing the concrete, iron, steel and many other elements used in the work? "We will," says the Massachusetts Institute of Technology, "and at cost, expecting no profit save the satisfaction that comes from ability to serve the city and the state." Thus does Tech, though not technically a city or state university, do what such urban institutions are coming to do more and more, as time goes on, and as the responsibility of the expert to society weighs more on the conscience of the "man who knows."—*Christian Science Monitor*.

An aërodynamic laboratory for the study of the characteristics of air currents has been constructed and is the first building completed in the new group of the Massachusetts Institute of Technology at Cambridge, Mass. The laboratory consists of an inexpensive structure housing a wooden tunnel 4 feet square and about 40 feet long, through which air is drawn by means of a four-blade wooden propeller 7 feet in diameter, revolved by a 25-horsepower electric motor with chain drive. The flow velocities obtainable are as high as 35 miles per hour.

The portion of the tunnel next to the fan is built of a sheet-metal cylinder, which diminishes in size toward the connection with the wood section. A wire grating is located just within the tube to catch any objects which might be drawn toward the fan, thus protecting the latter from injury. The mouth of the tunnel, at the opposite end from the fan, is fitted with horizontal tubes 12 inches long, to give direction to the air after it enters the tunnel.

Midway of the tunnel are planes for objects on which tests are to be made, and beneath this is located a balance which weighs three components—the forward push of the air on an object, the left and the twist of air currents at varying velocities. This apparatus was manufactured in England on the pattern of one now in use at the National Physical Station at Teddington and was exhibited at the Royal Academy, London, before being sent to America. It is the only machine of its kind in this country.

Pressure gages for tests of air pressures on objects in various relations under varying velocities can be placed at different locations in the tunnel,

and experiments are being made with propeller blades for aëroplanes to determine their most efficient shapes.

The courses in aërodynamics at the Institute of Technology are given by the department of naval architecture and marine engineering. The laboratory equipment and instruction are in charge of Lieut. J. C. Hunsaker, M. I. T., U. S. N., who was detailed for this work.—*Engineering News*.

Rollin Lynde Hartt, in a description of the magnificent new Tech buildings across the Charles, suggests a double paradox:

Double Paradox

In the first place, although Tech has removed a long way from the old site on Boylston street, the new buildings still stand on Boylston street soil. The answer to this is, that the new site in Cambridge was "filled in" with material excavated in digging the Boylston street subway.

The second paradox is this: The straight lines in the "sky line" of the new Tech are curves. The reason for this is, in part, to correct an optical illusion. If the horizontal lines were mathematically straight, they would look to the human eye as though they sagged in the middle.—*Boston Post*.

Addressing a reunion of the graduates of the Massachusetts Institute of Technology on the subject of municipal government, Henry M. Waite, '90, city manager of Dayton, Ohio, laid down the proposition that "A town will be governed only as well as the people desire and deserve." Mr. Waite in this connection:

"A government can be only as ideal as the community can appreciate and understand.

"Any step toward centralization of authority is an improvement; but a city can only centralize its authority as far as the people are prepared to accept and support it.

"No community is ready for the ideal (I use the term ideal as indicating the city manager form) until a large majority of the electorate is prepared to eliminate partisan politics from municipal affairs and keep them eliminated."

Mr. Waite has splendidly epitomized the causes of municipal ills. The reason for bad municipal government is that too few citizens interest themselves in municipal affairs. The undesirable element is always active and alert. It doesn't always follow that because a city has a rotten administration that a majority of its citizens favor that kind of government. The trouble in most cases can be traced to the negligence of the citizens in not asserting themselves. Not until every citizen stands up for his right to a voice in affairs shall the crafty politician and his trained followers be put on the shelf.—*Times Journal*. (Dubuque, Iowa.)

The personnel of the Board of Naval Advisers provides an interesting study for all those who are enthusiastic in pointing out the value of technical education. The board has twenty-three members, of whom nineteen are graduates of technical institutes or universities. This leaves only four who did not begin their life's work equipped with a technical-school education.

The nineteen count twelve institutions as Alma Mater. Of these, the Naval Academy leads with four graduates, Harvard follows with three, and the University of Michigan and the Massachusetts Institute of Technology have two each. Eight others have one graduate each: Worcester Polytechnic Institute, Stevens Institute of Technology, Cornell, Lehigh, University of Pennsylvania, Princeton, Ohio State College and the University of Ghent, Belgium.

Apparently an engineering education is a most desirable qualification if a young man hopes some day to become a member of an Advisory Board of the United States Navy. However, it must not be lost sight of that among the four men of the present board who have not had the advantages of such an education are the two men who are best known of the entire twenty-three members—Thomas A. Edison and Hudson Maxim.—*Machinist*.

Everett continues to produce football wonders surnamed Brickley, and the Brickleys continue to create all manner of commotions in the world of intercollegiate athletics. Just now Mr. George Brickley of the Trinity College football eleven is the centre of one of the nicest little snarls that expert interpreters of eligibility rules ever tried to unravel. Indeed, it would seem that a strict enforcement of the spirit and the letter of the rules of the Amateur Athletic Union would place an embargo upon the athletic activities of colleges all over the United States, and, marvellous to say, would leave the Massachusetts Institute of Technology as the sole institution with unimpaired amateur standing. The rest would be disqualified because—so runs the argument of a former president of the union—they either have played an eleven which had a professional among its members, or have competed with teams which have played such elevens. The objection to Brickley is that he has played summer ball for "remuneration." Williams, having played his eleven, loses its standing. If Columbia plays Trinity next Saturday, the New York school loses its standing. Furthermore, it is said that if that game takes place, New York University will have to cancel its date with Columbia. And so the links make a chain which reaches all the way to the far coast and back again; all the teams that have played Williams are disqualified, for instance; and in the end, of the twenty-nine members of the Intercollegiate Association, only "Tech" remains unscathed. Curious and absurd!

But in the light of Yale's action in the case of Legore and other stars of their first eleven, and of Brown's notorious toleration of summer baseball, it shows very clearly the necessity of agreeing upon a rule and upon the interpretation of the rule, and of their absolute enforcement once these agreements have been reached.—*Boston Herald*.

Since my return to the scene of Technology life I have noted a remarkable change. In the old days I used to wander from Rogers' to Walker's and from there to the engineering buildings looking for the answer to that much-discussed question, "Is there a Tech spirit?" Something has happened since those days. The Technology club is now my answer to that old problem. It is the embodiment of Tech spirit.

We used to say in Boston that things were successful on account of the support that the Institute could give by its nearness. Here in New York your club is successful simply because there was a "Tech spirit" which expressed itself in a way that was not to be detected on the surface. I remember the football days, when we were beaten by the "fitting" schools. The old cane rushes seemed to bring to the surface a little enthusiasm occasionally. I was shocked by some of the smaller groups of Tech men breaking loose at The Old Elm, The Reynolds or The Chapel, but these were always considered as freak evidences of abnormal conditions. The true "Tech spirit" in those days consisted in work and the Tech man was a true Beaver, only he didn't know it then.

How things have changed! How the Tech man has come to the front in all lines of endeavor. We hear of the largest office building in the world being erected by a Tech man. Colossal international enterprises are placed in the capable hands of M. I. T. alumni who can "rig the belts to heaven." The leading American architect, our foremost sculptor, and the most honored American mural decorator are all to be found in the Technology Directory. The great industrial organizations of the country all have Tech men represented in their branches. The telephone, oil, rubber, steel, powder, textiles and mining industries can all count Tech men in their front ranks. Railroads and the government claim others of equal prominence. Banking and economics also have attracted Tech energy, and so on through innumerable other activities. One Tech man is the leading statistician, another has the most famous chicken farm.

"Is there a Tech spirit?" There is, and it is unique. It speaks in terms of hard work and successful achievement. It is not spectacular. It does not bubble to the surface. It is sound through and through. It will always be modestly invisible except as the world comes to recognize the success that comes from long and patient endeavor.—December *Bulletin* of the Technology Club of New York.

"All the talk about preparedness, all the exhibitions and all the summer camps may be only a flash in the pan; for if peace is concluded or a peace conference is called before Congress gets down to lawmaking in the matter, that may be the end of it."

**Preparedness
Needs a Push**

Major Edwin T. Cole, U.S. A., retired, and instructor in military science at the Massachusetts Institute of Technology, thus expressed himself at a meeting of the Vermont Association at the Westminster, December 18. He said that this country had never learned to be prepared, and that it was possible it would not learn even in the present crisis. "What preparedness means to me," he continued, "is not so much getting troops together. I have little faith in the ability to get together any such body of men as the Secretary of War proposes. I believe that we should have an increase in the regular army and a reserve. We should brace up the militia. But as to getting 500,000 men, I doubt if we shall get them without conscription, and the country will not stand for conscription. Preparedness does mean, as the lessons of this foreign war have taught so strongly, the preparation of material—of guns that cannot be made in a day or a week—of rifles and cartridges. But even that is not the strong part of the game. The strong part of it is to sympathize with military affairs, to help the army to get efficient laws for organizing an army when the trouble comes—for business men who can influence and control politicians to see that laws are passed after being studied out by experts in these things."

Major Cole warned against what he called "that most pestiferous lot of people who go round the grammar schools and high schools year in and year out teaching the pupils that even to learn how to make war is a crime."

W. Rodman Peabody of Milton gave an account of his experiences at the Plattsburg camp. "It taught the men," he said, "how little they knew of military matters, and that if a man was efficient enough to be a corporal at the end of six weeks he had done better than the average. But it was a good thing for the men engaged. It not only put them in good physical condition, but made them more alert. Morally it was good, for it brought out the instinct of obedience and of obeying the law as no other experience does. I was impressed with the feeling shown of allegiance to the government, to the officers and most of all to the flag."—*Boston Transcript*.

BOOK REVIEWS

THE DESIGN OF STEAM BOILERS AND PRESSURE VESSELS. By Professors George B. Haven, '94, and George W. Swett, '03, Massachusetts Institute of Technology. vii+416 pages, 6 by 9, 196 figures, cloth. \$3.00, net. John Wiley & Sons, Inc.

The book deals primarily with the design of boilers of the non-watertube type from the viewpoint of determining the structural requirements to withstand stress and service. It is excellently adapted to accompany instruction in courses in boiler design as given at technical colleges. There are many original devices for minimizing the work of calculation, such as the plots for determining the thickness of thick and thin cylinders, dished heads, etc., and the chapter on riveted joints, which will be greatly appreciated by the designing engineer and technical student.

The discussion of the strength of flat plates covers the standard field in a thorough manner and is presented with unusual clarity. The general question of heat transfer and its influence upon proportions and arrangement is but slightly touched upon, the authors having held more to the design of practical details as used in good construction and the giving of desirable proportions as found from practice.

Complete calculations and attendant plans for the design of four different boilers are carried through in detail in the later part of the book and give specific application to the matter presented earlier.—*H. A. Everett, '02.*

CHEMISTRY OF FAMILIAR THINGS. By Samuel Schmucker Sadtler, '95. With illustrations. Octavo, pp. xii-320. Philadelphia: J. B. Lippincott Company. \$1.75, net.

The progress made by chemistry forms a striking episode in the history of contemporary science. Chemistry in our day has become what alchemy was to the lore of old—a magical domain, full of mystery and fascination. Not only have some of the dreams of the alchemists come true in laboratories—such, for instance, as the production of precious stones by the recombining of their elements—but results have been reached that seem to border on the miraculous. Inorganic chemistry has made enormous strides in our generation. The most brilliant exponent in this department of science was undoubtedly the French chemist Berthelot, who died but a few years ago; he was a literal miracle-worker of the laboratory. Berthelot came as near to finding out what substance actually is—that puzzle of the philosophers—as did any man who ever lived. He is said to have produced a beefsteak by combining the chemical elements which compose it.

It is surprising that the author does not mention the French magician of the laboratory in his roster of famous names. He cites, however, many others who have played an important part in the recent development of the science, and his book is full of interest for the amateur chemist. Mr. Sadtler's "Chemistry of Familiar Things" is addressed to those who would gain a knowledge of the fascinating science without being compelled to master its difficult formulas and technique. He remarks that chemistry is a difficult and confusing study for beginners, and yet it is known to be an absorbing and interesting pursuit to the chemist himself. Many have been repelled by the formidable mathematical appanage of the science, and to such Mr.

Sadtler's volume will be found a boon. His treatment is intensely practical and includes such subjects as Air, Water, Rocks, Soil, Food, Textiles, Chemical Evolution, and Physiological Chemistry.—*Literary Digest*.

A MANUAL FOR HEALTH OFFICERS. By J. Scott MacNutt, '08, First Edition. 660 pages. New York: John Wiley & Sons, Inc.; London: Chapman Hall, Limited, 1915. Cloth, \$3.00, net.

It is with the sense of having at last found a long-needed counsellor that one follows the author in this most valuable addition to the literature of sanitary science. One realizes that, for the first time perhaps, a gap has been bridged, not only between the older empiricism, which clings so tenaciously to the fabric of health regulations and procedures based on more definite knowledge, but one between the application of the more scientific principles of health conservation and the means at his disposal as provided in many localities.

The chapters on the organization of health departments, their relation to the public, to unofficial organizations and to the demands of a science that has been revolutionized in a generation, are models of clear conceptions of present needs, of a proper relation of available opportunities and present a strong argument for better coöperation among existing health agencies.

A perusal of Chapter V dealing with the essential differences of the "new public health" and former conceptions would be distinctly beneficial to all members of health boards and legislative bodies. Here is a well-balanced and pleasing presentation of the possibilities in the prevention of premature mortality, standardizing, as it were, causes of death and well indicating the relative value of old and new methods, a valuable guide to communities that must carefully consider each expenditure.

Under Public Health Administration, well-tried systems of record-keeping are given, the newer theories of infection outlined and the need of careful epidemiological studies properly emphasized. In covering the various communicable diseases, due regard is paid to cases and carriers—to contact; yet only reasonable requirements are outlined, nor is the student left stranded at the ultimate ramifications of impractical theories. The bearing of control regulation on all affected by them is dealt with judiciously, for the greatest good of the whole and the expenditure of the health dollar as outlined by Mr. MacNutt should purchase a hundred cents' worth of health protection.

A criticism might possibly be made of the rather sweeping advice on the employment of immunizing doses of diphtheria antitoxin among exposed persons (p. 137). In view of possible anaphylaxis it might be well to govern this use of antitoxin by the application of the Schick toxin reaction for immunity or even, in view of the relatively feeble infectiousness of this disease, omit it entirely where contacts may be kept under expert supervision and symptoms be thus recognized early.

The author does not consider tetanus neonatorum, though its occurrence in certain sections of the country would indicate the advisability of official control.

The failure to mention the more recent work of Goldberger on the dietary origin of pellagra is due probably to an oversight.

The true relation of schools to communicable disease and the important place of school medical inspection and child hygiene, in well organized health departments, is admirably outlined.

Adapted especially to the needs of the executive officer, are the chapters on milk

and other foods, water supplies, housing and industrial hygiene. Sufficient information is supplied to establish their correct status in health administration without burdening the reader with details that belong more to the text-books of the laboratory worker.

A working basis of vital statistics, as well as valuable hints for better registration, are given in Chapter IX and the sane application of publicity to departmental work completes this altogether well-rounded manual.

Wherever details are omitted in the text, supplementary information is to be found in the appendices or may be sought in the abundant references given.

The health officer who has acquired some degree of proficiency through bitter experiences will recognize the adviser he has long needed and the one first entering upon the manifold and complex duties which must be assumed, if his community is to receive sound guidance in all that makes for better sanitation, will, many times, consult this volume with profit and relief engendered of its clear outlining of the best in the great modern movement of public health.

It will serve at once as an inspiration to those fitted to undertake the responsibilities of health administration and, not less important, will serve to deter any who might consider lightly the obligations attendant upon the proper execution of their duties.

It is truly a manual for health officers and as such answers clearly many of the vexatious problems that continually present themselves to the practical sanitarian.—C. E. Terry, M. D., in *Public Health Journal*.

SAMPLING AND ANALYSIS OF IRON AND STEEL. By O. Bauer and E. Deiss. Translated by W. T. Hall, '95, and R. S. Williams, '02. Pp. 373. Illustrated. New York: McGraw-Hill Book Company.

The book was written as an outcome of experience gained in the Royal Testing Bureau at Gross-Lichterfelde, Germany. It emphasizes the need of special care in preparing samples for chemical examination and gives reliable methods for the determination of all the constituents likely to be present in iron and steel. The first part of the book, which deals with the arrangement of a metallographic laboratory, the metallographic treatment of polished specimens, the causes of local differences in chemical composition and the conditions which render the taking of representative samples difficult, has been translated literally, but the second part of the book, which deals with the methods used in the chemical examination of iron and steel, has been greatly amplified and about twenty-five methods have been included which are much less laborious and time-consuming than those of the original German text and which have been shown, by work done at the Institute and by chemists working for the Bureau of Standards at Washington, to be thoroughly reliable.

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NEWS FROM THE CLASSES

1868.

ROBERT H. RICHARDS, *Sec.*, 32 Eliot Street, Jamaica Plain, Mass.

The secretary has led a rather strenuous life lately, and has not found the position of retired emeritus professor the bed of roses with fragrant air and much ease, which might be expected.

He has spent many weeks in travel, especially in the West, and while in San Francisco in September attended a meeting of the International Engineering Congress, where he read a paper. In December he was in Washington, where a meeting of the Mining and Metallurgical Society of America was held, to see if the good work of improving the mining laws of the country could be aided.

South American affairs have also claimed his attention as the Pan-American Scientific Congress at Washington convened to see if help could be given in engineering matters to our South American neighbors. Here too he read a paper.

During his western wanderings he has been beautifully entertained by alumni of the Institute in San Francisco, Galt, Palo Alto, Los Angeles, Tucson, Globe and Pittsfield.

The secretary wishes to call to the attention of every member of the early classes of the Institute the dates of June 12, 13, 14. At this time the great event of Technology's fiftieth anniversary and dedication of the new buildings will be celebrated, and a farewell is to be said to the old buildings. All Tech men should plan to be in Boston and take part in these memorable exercises.

1870.

CHARLES R. CROSS, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

Nathan Frederick Merrill died suddenly of dilatation of the heart on October 26 last at Burlington, Vt., aged 66 years.

Mr. Merrill was born in Cambridge, the son of a well-known teacher of Latin in Boston, Nathan Merrill. He entered the Institute in 1867, choosing the course in chemistry and graduated in 1870. He was an excellent scholar and devoted to the subject which he had chosen for his profession.

After his graduation, he studied abroad at Heidelberg, Leipzig and Zurich, at which latter university he took the degree of Ph. D. in 1873. After occupying various minor positions, in 1885 he received the appointment of professor of chemistry in the

University of Vermont, in which position he remained in active service until his retirement in 1914. He was a member of the American and German Chemical Societies and of the Alpha Tau Omega Fraternity. He never married, but resided in the college quarters up to the time of his death. The funeral services were held in the College Street Church, October 28. The burial took place at Mt. Auburn Cemetery, Cambridge.

The following sketch by one of his colleagues indicates his characteristics in later years, and expresses the esteem in which he was held at the university.

"During Professor Merrill's time at the university no one has been closer to the life of the campus than he. To his boys he gave all of himself—and he had so much to give, both of heart and head. Hence everyone who has gone from the college during the past thirty years recalls not merely the high-minded professor and brilliant lecturer, but the sympathetic adviser and loyal friend, and, returning even for an hour, has hastened to his beloved teacher's study. He was the tutelary genius of the hill, rallying about him in his rooms through the wonderful magnetism of his presence, the charm of his speech, and the humor and fancy that cloaked his depth of thought, both faculty and students. The influence that he always graciously exerted in the direction of all that was good and fine and true, was so strongly felt by the many who knew him well, that he became to them a symbol of the things most precious and memorable in their training. The impression of a mind so keen, a temperament so artistic, a spirit so lofty and delicate, a heart so warm and loving, will long abide among his friends and fellows. He ever graced and honored the title of professor, and his memory will be cherished as a splendid tradition of the university."

The earlier classes of Technology should make special effort to be present at the coming anniversary celebration of Technology and dedication of the new buildings.

The dates will be June 12, 13, 14.

1873.

SAMUEL E. TINKHAM, *Sec.*, The Warren, Roxbury, Mass.

Charles Edward Stafford, inventor and for many years prominently identified with the steel industry of this country, died early November 27, following an attack of apoplexy, at his home on Lancaster avenue, Haverford, Pa. Mr. Stafford, who retired from business several years ago, had been ill for two weeks. He was born at Plymouth, N. H., sixty-one years ago.

He received a degree in mining and metallurgy at the Massachusetts Institute of Technology, where, for a short time, he was instructor in the metallurgical laboratories. Later he became associated with several companies at Wyandotte, Mich., and

subsequently with the Pennsylvania Steel Company at Steelton, Pa., in the capacity of chemist. While in charge of the open-hearth department, Mr. Stafford made many radical changes in the construction of hearths, his inventions being adopted throughout the country.

In 1880 he superintended the making of the first Bessemer steel ingots in the United States. Several of the leading iron and steel men of this country have been under the tutorship of Mr. Stafford, whose work is known in Europe as well as throughout the steel industry of the United States.

During the years 1885 to 1891 he was connected with the Shoenberger Steel Company, of Pittsburgh, where he designed the Bessemer plant now in operation by that company. He went to South Chicago in 1896, where he assumed charge of the Illinois Steel Company's plant, and from there he went to Chester, Pa., in 1901, where he was head of the plant of the Tidewater Steel Company.

He was a member of the American Institute of Mining Engineering, the Chi Phi Club of Chicago, the Manufacturers' Club of Philadelphia; the Penn Club of Chester; the Harrisburg Club, the Pittsburgh Club and the Merion Cricket Club. He is survived by his widow, who was Miss Mary Louise Hammell of Chicago, and two children.

The attention of the class is called to the announcements, in this issue of the REVIEW, of the dedication of the New Technology and the farewell to the old buildings. The dates are to be June 12, 13, 14.

1877.

RICHARD A. HALE, *Sec.*, Lawrence, Mass.

Members are requested to bear in mind the dates of June 12, 13, and 14 of 1916 for the All-Technology Reunion and plan their visits to Boston at that period in order to assist in making it a success. Details will be announced later regarding any definite plans of the class. Those members residing at a distance are particularly requested to make a note of these dates.

Henry D. Hibbard, consulting engineer, has sailed for Sydney, Australia, stopping at Honolulu and Samoa on the way. He expects to be absent for a long period on consulting work. He visited at the San Francisco Fair for a few days before sailing.—F. C. Holman, mining engineer, who returned from Costa Rica a few years ago with a broken leg, is now living in Palo Alto, California, and making explorations during the summers in the mountains, with occasional investigations of mining properties.—A letter was recently received from Taber who is located at Spokane, Washington, and is engaged in railroading and land development. Some water powers are also being investigated. Taber is also in-

terested in fruit-growing, having a tract of land set out with apple trees, which are yielding some return.

1879.

CHARLES S. GOODING, *Sec.*, 27 School Street, Boston, Mass.

Particular attention is called to the general announcement of the reunion in this number of the REVIEW. This reunion will be a most interesting and enjoyable occasion, as it combines the regular five-year reunion and is the fiftieth anniversary of the opening of the Institute and last, but not least, the dedication of the new Institute buildings on the banks of the Charles will take place. The reunion will be held on Monday, Tuesday and Wednesday, June 12, 13 and 14, and it is earnestly hoped that there will be a large number of the class of '79 present. Begin to make your plans now to be present at this reunion.

The following is a letter from Philip Little headed MacMahon Island, Maine:

All I know of any of the men of our class away from Boston is of Harry Curtis, who is a successful business man in St. Paul, Minnesota, with "Curtis 1000" as a slogan telephone call. He looked me up last spring and we had a pleasant hour together.

As for myself, I served the city of Salem as common-councilman one year; alderman two years, school committee fourteen years, state fourteen years in militia, three years as sergeant on brigade staff, and eleven as captain and engineer aide de camp, 2d Brigade, M. V. M., and captain commanding A company 2d Corps Cadets, M. V. M. Retired as major 1901.

The only office I hold of a public nature at present time is, curator of Fine Arts, Essex Institute, Salem. I have exhibited paintings all over this country and in South America, Rome, Paris and Munich. Have been awarded honorable mention at Chicago Art Institute and silver medal at the Panama Pacific Exposition. Am represented in permanent collection of Pennsylvania Academy of Fine Arts; Walker Memorial Gallery, Bowdoin College; L. & M. Swett Memorial Gallery, Portland, Me.; Minneapolis Art Institute; Milwaukee Society of Art; Nashville Art Association; Dubuque Art Association; St. Louis Art Museum; Loan Collection Boston Art Museum; and in private collections, Salem, Boston, New York, Washington, Minneapolis, Nashville, Chicago, St. Louis, St. Paul, Utica, Montreal and various other places.

I have a son, daughter-in-law, and two grandsons in Minneapolis.

The president of the class has been to see my pictures and to pass on their merits.

I regret that I do not know of any other men besides Curtis, but such is the case. I will drop in to see you some day.

1881.

FRANK E. CAME, *Sec.*, Metcalfe Apartments, Westmount, Quebec,
P. Q.

FRANK H. BRIGGS, *Asst. Sec.*, 146 Summer Street, Boston, Mass.

Godfrey L. Cabot, president of the Aero Club of New England, is deeply interested in better military preparedness in the United States, and especially in aviation as a powerful aid to our coast line defences.

Mr. Cabot earnestly requests that all interested Tech men, who wish to further this patriotic movement, will write him or call at his offices in the Old South Building in Boston.

The following detailed account of his work in this line is taken from the Boston *Herald* of November 19:

Interested in aviation, but with their primary object of furtherance of preparedness for defence of the United States against aggression by a foreign power, five citizens of Massachusetts are learning flying at Marblehead, and there are now in process of construction two large hydroplanes which they expect to use in practicing the various arts of aerial warfare, and in teaching these to other persons when they themselves shall be skilful enough to give instruction.

One of the machines is to be owned and operated by Gordon Balch, Norman Cabot, Richmond Fearing and Dr. John C. Phillips; the other one will be the property of Godfrey Lowell Cabot and will be operated by him and his eldest son, James Jackson Cabot. Aeroplanes of the Burgess-Dunne type, to which these belong, have no rudders. The wings slant backward and have ailerons at their tips, behind. To rise, the operator raises the ailerons, with the resulting effect of tilting the machine upward; to descend the ailerons are lowered. If it is desired to turn to the right, the operator tilts the right-hand aileron upward and the left-hand one downward; this raises the left wing and lowers the right wing and the machine then glides sideways by reason of the slope of the aeroplanes. In sliding to the right the machine is swung to the right by the vertical planes at the tips of the wings and the front edges of the right-hand wings.

The hydro-aëroplane of this type steers like a bicycle, but balances exactly the reverse from a bicycle, making its operations slightly puzzling to a bicyclist at first. The machines have a nacelle with two seats, one before, the other behind, with a double control, and they carry a larger supply of gasoline than any other models of this type built for pleasure purposes only, so that they are able to make longer flights. The wings have a span of 46 feet and the machines are equipped with motors of 140-horse-power.

"My hope," says Godfrey Lowell Cabot, who is deeply interested in this movement for preparedness, "is that other men will buy machines and learn to fly, with the distinct understanding that their machines and their own services will be at the disposal of the federal government in case of war. Germany stands for the spread of *kultur* by any means at her disposal. I stand against that, and our primary object is preparedness against that hour which will come, early or late, when we of America must defend our shores against aggression from Germany or from some other power unless we strengthen our defences to such an extent that other nations will not dare to attack us. I hope that this undertaking to which we are devoting our efforts will prove to be the entering wedge in a movement of national proportions.

"I would urge four considerations, the truth of which can be verified by anyone who wishes to help protect this country from foreign domination:

"First, less than one in 1,000 of the combatants in Europe are in the air.

"Second, these airmen are nevertheless of vital importance in directing artillery fire and watching the movements of infantry, and are more important than 100 times the number on the ground. They are the eyes of the army.

"Third, this country, in which aviation had its birth in December, 1903, is now at about the tail end of the aviation procession, and today there are not 20 flying machines available to us for efficient military service, while France has something like 3,000.

"Fourth, an aviator recently remained 24 hours in the air. Two such flights stopping in Greenland or the Azores, with a favorable wind, would carry him across the Atlantic. Norman Prince thinks that aviators will fly across Germany from France to Russia before this war is over. I believe that before it is over aviators will be landing, tearing up railways, and flitting off again.

"One hundred hydroplanes properly manned would make a reasonably good coast patrol. One thousand would give us a superiority in the air at our coast line

against any attack, under present conditions of foreign armament. Ten thousand would cost less than ten battleships, and if properly designed and manned, would exceed the total air force now extant.

"We do not know whether we shall be attacked this year or ten years hence, or when; but it is reasonably certain that we shall some day be attacked and see the horrors of Belgium, of Poland, of Serbia repeated on our soil—unless we prepare. Let us begin by training and equipping a patrol.

"We who are associated in this effort wish to hear from all who will join us and thus increase by a hundred fold their probable military value to the country in case of war—and in averting war by manifest preparedness. We want more machines and more men selected with a view to military use."

Mr. Cabot invites correspondence or personal visits from anyone that wishes to join in this movement or to further its spread. He resides at 16 Highland street, Cambridge, and has offices in the Old South Building, 294 Washington street. He is a manufacturer of carbon black and producer of natural gas.

Gordon Balch is with the firm of Stone & Webster, contractors, engaged in construction of the new group of Technology buildings. Norman Cabot is with Cabot, Cabot & Forbes. Richmond Fearing is well known as an athlete. Doctor John C. Phillips will be unable temporarily to take an active part in the work of the movement, having just sailed for Europe with the second Harvard medical unit. These gentlemen are Harvard alumni.

Barnes writes:

When I get off this far I miss the Tech Club so much that I must at least let it be known that M. I. T. sentiment is a strong lashing and grips most of us with lead pipe cinch.

In the first place, I want to say that Leonard Metcalfe got me into this chasing about the belt from lot N10° to 15°. He knew I had seen life in Alabama and Texas, and being a Texan himself, thought well of my education. He did not know at first that my better half was from Texas, too, and I didn't then know his good opinion of the Lone Star people. If I had I could just as well have pushed the salary proposition a notch further up.

Anyway, I enlisted over eleven years ago for a year and a half and am still at it, and what is more, on the work we were going to spend that year and a half, we ourselves never went further than the study stage.

However, the company of which my principal was and is vice-president was at that time a good-sized boy, and growing fast. They needed my services in Panama. Here we built our first concrete wharf. One thing led to another, water supplies, reinforced concrete office and merchandise buildings, as well as wharves; standardizing residences, building hospitals, laundries, etc. I have not had to do with railroad work. Municipal and terminal questions occupied my time.

The place I am writing from is our latest baby, soon to pass its third birthday. We feel quite proud of the clean-cut town where even now a flavor of real society reigns. I ate my Thanksgiving dinner with one of the oldest inhabitants, in a home as attractive as one could wish.

My headquarters have been for two years in New York, where, in connection with our purchasing department, special construction can be best directed. It is very interesting to make these excursions to the various points in this belt—Cuba, Jamaica, Colombia, Panama, Costa Rica, Honduras, Guatemala, etc. We see the results of our work, always seeing some way to adapt means to ends, and to economize in cost, and not forgetting to strive to promote a state of content in the general staff, without which long distance effort would be fruitless.

So now when you eat your next banana don't forget the infinite pains we are taking to bring you the freshest possible exposition of that prince of fruits.

My departure from New York was saddened by the news of the sudden death of Frank Rollins. I shall miss the smiling greeting on my visits to Boston which especially the '81 men got when they found the governor in his office.

The secretary heard from Rosenheim in November, the first

time in years. He is still in Los Angeles and doing a fine business as consulting architect.

To the Class

Our THIRTY-FIFTH will be in 1916. We have got to "show something," in numbers, at least; in stunts, if possible. Every one make arrangements to be here Monday, June 12, and stay the week. This is the fiftieth anniversary of the opening of the Institute and we were only thirteen years behind the start.

Let's get there!!!

1882.

WALTER B. SNOW, *Sec.*, 136 Federal Street, Boston, Mass.

"The New England Conscience" is the title of a most interesting biographical and historical study by James Phinney Munroe. This book is printed by Richard G. Badger at the Gorham Press, and sold by him at 194 Boylston street, Boston, and by all venders of choice books.

Of this volume it is said:

To bring into harmony Samuel Adams, the first Mayor Quincy, Theodore Parker, Abraham Lincoln, and Mme. de Maintenon requires a potent force, and Mr. Munroe finds it in the "New England Conscience." This force, preëminent in building the United States, is still, in his opinion, active and growing. He finds the New England Conscience, moreover, behind those picturesque and little known episodes, Shays' Rebellion and the mobbing of the Charlestown Convent, depicts its fruition in the "Heart of the United States," and traces its origin to the Eternal Feminine.

Munroe is also the author of "The Educational Ideal," "New Demands in Education," "Adventures of an Army Nurse," "The Munro Clan," etc.

The class is earnestly requested to bear in mind the dates of the All-Technology Celebration, June 12, 13 and 14.

In reply to the secretary's urgent inquiry as to the possibility of his attending the Great Reunion, Johnson writes:

I do not think there is a ghost of a chance of my coming East next year. The prevailing conditions have put a crimp in a number of real estate ventures I have in hand and I am not indulging in any large extravagances. Had a most enjoyable 1400-mile auto trip this summer with my entire family. Had our machine arranged so that some could sleep in it while the rest took to sleeping bags. Had a small pantry bolted to one running board, in the bottom of which we installed a home-made gasoline stove, and we were as independent as possible. Went up in the high Sierras, stopped where we cared to and stayed as long as we chose. Took in the Big Trees, Yosemite Valley, Exposition, State Redwood Park, Monterey, Carmel, etc. We are talking of Yellowstone next year, but I dunno, it is a long way from home.

1884.

HARRY W. TYLER, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

P. S. Morse of Australia is living at present in Brookline, Massachusetts.—R. R. Goodrich has recently left his professor-

ship at the University of Arizona for a similar position in Idaho.—H. D. Hooker's son is listed in *Science* among the new Ph.D.s of last summer.—Colonel and Mrs. Lyle have made their usual fall visit to Boston.—The secretary and Mrs. Tyler were among the Pacific Coast travelers of the summer, "seeing America first" from the Grand Canyon to the glaciers of the Canadian Rockies.

The annual dinner for 1916 will be held in accordance with plans for the great reunion on June 12 instead of in the spring. The place will be announced later. We want an "every-member canvass" to bring all members of the class who claim that they still live to celebrate this occasion and participate in dedicating the new Technology.

1885.

I. W. LITCHFIELD, Sec., Mass. Inst. of Tech., Boston, Mass.

Frank Page, whose rise as a manufacturer has been very rapid, has recently figured in some very important transactions relating to the sale of the Stevens Duryea Automobile Company and the Stevens Arms Company to the Westinghouse Company. The latest honor that has come to him is his election as chairman of the Board of Trade of Springfield. This year is a very important year for that city, as the immense operations of the Westinghouse Company have brought to Springfield a very large number of both skilled and unskilled men, and the growth during the next five or ten years is likely to be very rapid. The city has been noted for its public spirit, and just at this time its substantial men are making plans for the future on a very large and comprehensive scale. This gives Frank about all he can do without much time for his own personal affairs. Page is getting ready to build a great, big, beautiful mansion in Longmeadow, a suburb of Springfield. Horace Frazer is going to draw up the shack, and Jack Harding is to design the stein room, which is to be large enough to amply accommodate the class of '85. Better pack your satchels now so that you will be ready for the grand opening.—Billy Spalding tells me that he intends to open an office on Dartmouth street in Boston, where he will indulge in his taste for interior decorating and the sale of special antiques.—Tenny and Mrs. White are spending the winter in California, intending to return to Boston some time in April.—About the last of December invitations were received from Mr. and Mrs. Sidney Williams to the marriage of their daughter, Alison Reeves, to Mr. Harry William Hazard, Jr., on Thursday, January 20, at the Church of the Transfiguration, East Twenty-third street, New York City.—On the second of October Miss Louise Anne, daughter of Mr. and Mrs. William J. Mullins, was married to Dr. Arduus Clair Thompson at St. John's Church, Franklin, Pa.—Bob Richardson, who is connected with the Electric Bond & Share Company of New

York, has been spending a great deal of time in the West on business for the company. The *Herald-Republican* of Salt Lake City, Utah, has an article in its issue of November 24, as follows:

After having reorganized the merger of the power companies in southern Idaho, R. E. Richardson of New York, efficiency expert for the Electric Bond & Share Company, arrived in Salt Lake yesterday. He said he expected to remain here a week or more, but he declined to say what brought him to Utah.

The Electric Bond & Share Company is understood to control the Utah Securities Corporation, the holding company for the Utah Power & Light Company and the Utah Light & Railway Company.

Mr. Richardson said he left the merged Idaho power companies in excellent condition with rates readjusted to the satisfaction of consumers and power producers and W. T. Wallace, formerly receiver for the Great Shoshone & Twin Falls Water Power Company, in charge.

He said all the power companies operating in the southern Idaho field, except the Great Shoshone, are included in the merger. The Great Shoshone Company is to be sold early in January and unless there is some change in the present situation it will be taken over by the Electrical Investment Company, the holding company representing the Electric Bond & Share Company in Idaho.

The Salt Lake *Tribune* of December 1 gives an account of a luncheon given by the Utah Electric Club of that city, at which Bob was the principal speaker.

1886.

ARTHUR G. ROBBINS, Sec., Mass. Inst. of Tech., Boston, Mass.

Frank L. Locke has been carrying on for some years now what he calls a "Headquarters of Opportunity." Its legal name is the Boston Young Men's Christian Union, and he is the president, in succession to William H. Baldwin, who founded the Union sixty years ago, and made it one of the institutions of Boston. While keeping up at full steam the many activities which were developed under his predecessor, Locke is continually extending the work of the Union in new directions, and is making special use of the principle of coöperation, or of what the educators call "organized group work," in extending greatly the activities and usefulness of the institution, without adding materially to the cost of running it.

Locke says regarding his work:

"One of the greatest needs of the day seems to be the development of individual responsibility and initiative. So effort is made at the Union to interest young men in the administration of all the activities in their behalf. In this Headquarters of Opportunity, young men having common interests or objectives may associate themselves, as they are doing, in groups or clubs, according to their special aims, and, aided and directed by the institution, accomplish their purpose at a minimum of expense.

"It is the general plan, now being carried out with a considerable degree of success, to supply room or meeting-place, heat and light—the overhead charges, if you please—leaving for the young men to supply only the actual cost of special instruction or expense

peculiar to the individual group. This coöperative, self-service style of evening groups is extended as rapidly as is feasible, the only restriction being that the subjects taken up be things that young men would not be ashamed to tell their mothers about.

"The Union's main effort might perhaps be considered the development of citizenship in the highest sense, or, in other words, complete citizenship. Coöperation with other organizations is sought. The Union pictures a skirmish line of settlement houses, boys' clubs, school centres, and other institutions dealing particularly with the home and neighborhood problems. From these outposts would come by natural inclination as well as by team-play, suggestion and direction, the specially fitted, specially ambitious, just as the more fortunate at the same period might go away to college. Here the 'live wires' or ambitious youth, associating with others likewise attracted or directed from store and shop, from college or church, may coöperate in all kinds of self-improvement. These activities are carried on in distinct coöperation with other agencies in the city and it is hoped soon, for example, to have the educational classes, round tables and clubs so directed and supervised by school and college authorities that accomplishments in them may be distinctly valued in later college extension or regular college work."

In carrying out this general scheme, the Union is a hive of activity from early morning till late at night, its library, gymnasium, etc., being, of course, in ceaseless service, and every room and corner being filled with clubs and classes,—the latter not being formal classes, where information is poured into the young fellows once or twice a week, but being, as already said, organized groups where young men with a common interest get together to improve one another and to thresh out by mutual "give and take" matters important to them and to the community. Out of such a group has recently come the organization for constructive service of a council of fifty men and women to devise an adequate and practical plan for the development of the greater Boston district of a million and a half people. This Council of Fifty, with the coöperation of the Homestead Commission and the various city planning boards of the state and organizations interested, has recently conducted a City Planning Exhibit of a week's duration, developing much interest in possibilities for an improved Boston and enthusiasm for steps to make such possibilities realities.

It should be emphasized that the Union gives not only opportunity for the young fellow who comes to the city without friends, and to whom such a meeting-place as this means everything in the way of friendliness and opportunity, but it gives a fine chance also to more fortunate young men, especially to college undergraduates and graduates, to pass on to these less lucky chaps their own opportunities, and at the same time to learn a lot from them. As Locke says:

"Here likewise is opportunity for the young men from the church to join in these group activities, contributing from their experiences and adding their inspiration; for the Union is a Christian organization interpreting 'Christian' in a broad, inclusive sense; not passive, sentimental, one-day-a-week, but a seven-day-and-night sort of 'Christianity' that is active, practical and up-to-date."

J. P. M.

The secretary will need the coöperation of every member of Eighty-six to aid in the great celebration next June.

1887.

E. G. THOMAS, *Sec.*, Wilson Tire & Rubber Co., Springfield, Ill.

The Illinois Humane Society has for its president, John L. Shortall, '87; for its vice-president, Solomon Sturges, '87; and on its executive committee, Richard E. Schmidt, '87. As the society is most influential in its work of preventing the abuse of children and animals and as it owes much of its efficiency to the continuous work of Shortall for many years, the following statement of his connection with it is of great interest:

This society was organized in 1869. The scope of its work extends throughout the entire state of Illinois, the principal office being in Chicago, at 1145 South Wabash avenue, where are located its offices, its lecture hall and library, and where three of its officers dwell—the ambulance officer, the house officer and the matron; and on the rear of the premises is the garage and stable, where the motor ambulance and horse ambulance are kept, also a Ford car for emergency runabout purposes, and a stall for the temporary handling of disabled animals—merely a distributing point, so that the animal may be taken to the hospital or to its home as promptly as possible after it is picked up by the society. The objects and purposes of the society are as follows:

The prevention of cruelty to animals, and the prevention of cruelty to children.

In about 1892 I organized the law department of this society, so that it had members of the Illinois bar as members of its law committee or law department; and I was continued as chairman of this law department until 1906, when I was elected a director and president of the society as successor to my father, John G. Shortall, who, after thirty years or so of service, had concluded to resign. During this period the society had in its employ on salary one lawyer, a member of the law department, his services being rendered solely to the society, he having his office at the society's building. This plan is still continued, that lawyer, Mr. George A. H. Scott, still being retained as such counsel. I have been continued since 1906 as president of the society and member of its law department up to the present time.

The secretary calls attention to the tentative plans and announcements of the coming All-Technology Reunion. The dates of the celebration are June 12, 13, 14. Everyone should plan to be in Boston at that time.

1888.

WILLIAM G. SNOW, *Sec.*, 24 Milk Street, Boston, Mass.

At a dinner of the Chamber of Commerce at Columbus, Ga., November 18, George C. Scales, senior highway engineer, office of

public roads, U. S. Department of Agriculture, was one of the speakers. In connection with Georgia products day, Scales conducted a road-building demonstration.—Charles H. Mower writes as follows from Paris of his impressions of the war:

A resident in Paris since the outbreak of the war, I have received many vivid impressions which may be of some interest to my fellow-members of the alumni.

One of the things which struck me most forcibly on that memorable first day of August, 1914, was the change in the aspect of the Paris streets immediately after the order of mobilization was posted up. The first news of the order reached the general public at about 4.30 in the afternoon. The Paris streets, previous to this hour, wore their usual appearance of activity; they were filled with the bustling crowd of pedestrians, with private automobiles, taxis, and a large number of lumbering motor-buses. Half an hour after the mobilization order was published, the great buses had disappeared and even the more rapidly moving taxi-cabs were difficult to find. I afterwards learned that all the motor-buses were immediately taken over by the military authorities for the transport service, but the striking thing was that it was done so quickly.

In one of Mr. Lloyd George's great speeches, in connection with the supply of ammunition for the war, he referred to it as "An Engineers' War." This is certainly true, as no profession, on either side, has contributed so much to the waging of this great conflict as have engineers.

Whether it be in connection with the supply of ammunition and guns or other war material, the providing of thousands of automobiles for the transport service, the building of aeroplanes and submarines for carrying the hostilities into the air and underneath the water, of ships for the navies, in constructing railroads, bridges, etc., the various war offices have had to depend to a very great extent upon the skill of the engineers.

In fact, the great ability of the engineering profession has made this war the most terrible that has ever been fought. The machine-gun alone has accounted for thousands upon thousands of lives; indeed, it is not too much to say that the inventiveness of the engineering profession has increased the cost in lives in this struggle, to an extent unprecedented in the history of the world.

I had the opportunity, some weeks ago, of visiting what is known as the "B" zone of the French army in the neighborhood of the city of Nancy. The "B" zone is a part of the country running parallel to the trenches at a distance of about ten to fifteen kilometres. This zone is filled with the army reserve forces and with all the machinery necessary for the supply and upkeep of a great army in the field.

After securing the necessary passports, kindly given me by the prefect of police in Nancy, I was able to visit the town of Lunéville and its neighborhood, which, in the latter part of the month of August last year, was the scene of a very heavy engagement. Lunéville itself showed the effects of a bombardment, but most of the destruction had evidently been accomplished by the incendiary work of the German forces. A visit to some of the outlying towns permitted me to realize, very forcibly, the effects of modern artillery. Some of these towns were almost entirely levelled to the ground, hardly one stone remaining upon another. A high hill, about four to five kilometres from Lunéville, upon which stood before the battle a very large farm, with many supplementary buildings, had been, on account of its prominent position in the landscape, a target for the German guns. The farm buildings were completely destroyed and the sloping sides of the fields, especially towards the German frontier, were pitted with holes some six to eight feet in diameter and several feet deep, in such close proximity that one would certainly have come to grief in walking over the fields in the dark. Dozens of graves, with their little wooden crosses over them, each marked with the name of a dead soldier and his number, were scattered along the highways and over the fields, giving the saddest impression possible and showing the severity of the engagement and the great loss of life sustained.

In the little village of Crévie, not far from Lunéville, stood the beautiful château owned by General Lyautey, commander-in-chief of the French forces in Morocco. His reputation as a great French general and I presume particularly his success in

Morocco, evidently angered the Germans, for the château, with all its contents, was completely destroyed by fire. A tour with our guide through the beautiful park showed the marks of rifle fire on the trunks of the trees, and in the open fields the concierge pointed out to us a hole in the ground caused by a German shell, where, she told us, four horses had been buried.

We lunched in this village in a *petite auberge* with a party of soldiers who had been detailed off to assist the farmers to gather in the crops. These men were still under military authority, but were paid, I think, about two francs a day by the farmers. This system seems to be carried out quite extensively, as in the neighborhood of Chartres, which I visited during the month of August—the harvesting period—the same assistance was being rendered to the farmers by soldiers. Going through this little village of Crévie, we were approached by a French officer who, very politely, asked to see our passports. Seeing that they were all in order, he apologized for giving us the trouble of showing them. I believe that since I have been in France, I have had, during the war, to show my passports literally hundreds of times; in no single instance have I been asked to do so with anything but the greatest politeness. I have been very forcibly struck with the efficiency of the French military authorities in enforcing their passport regulations, but certainly these regulations are carried out with the least possible annoyance to travelers and with the greatest amount of courtesy.

Continuing our trip from Crévie and on the way back to Lunéville, we passed on the road a hundred motor-transporters each containing about twenty-five men, which, I presume, meant that two regiments were being shifted along the line. These transports were bowling along the road at the rate of about twenty miles an hour, giving one a striking example of what the engineer has accomplished in this way and how he has increased the speed at which armies can be moved. In the old days, these soldiers would have been obliged to make a forced march, and on the top of that, perhaps fight an engagement which could not be otherwise than a terrible strain upon their strength already exhausted by many miles of tedious marching.

On our way back by train from Lunéville to Nancy, we were very much entertained by a French battery trying to bring down a couple of *Tauben*. Judging from the positions of the puffs of smoke, the shells were seemingly bursting all around the *aéroplanes*, but, unfortunately, the latter sailed back undamaged, so far as we could see, to the German lines.

It has always seemed to me that it would be most difficult to hit an *aéroplane* even with special artillery, at a range of anything like 6,000 to 7,000 feet, if the *aéroplane* was moving at the rate of about seventy to one hundred miles an hour. I have found it difficult enough to bring down ducks, moving approximately at the same pace, with a shot-gun at forty to fifty yards, when it is possible, of course, to move the light shot-gun very much more quickly—and consequently get a more accurate aim—than it is to move a high-powered piece of artillery. The percentage of casualties among the *aéroplane* pilots in this war is surprisingly small. Again the engineer has almost completely changed modern warfare by his genius in making a conquest of the air.

The long-continued operations on the western front bears testimony to the ability of the engineering officers of the armies to build trenches and defensive works so strong that two great forces have been facing each other for months without material advantage to either side, excepting within the last two or three weeks. Trenches, dug-outs, tunnels, barbed-wire entanglements and other construction have practically prevented any very serious advance upon either side, on account of the terrible losses which would be incurred in trying to overcome these obstacles. The recent offensive in Champagne makes it look as if only by continued artillery fire from all descriptions of guns can such works be sufficiently destroyed to enable the attacking party to overcome the resistance with their infantry. Again, the war shifts down to the question of guns and ammunition supplied by the engineers.

What new methods of warfare engineers will find to make this war even more destructive to human life is hard to say. It would seem that, with submarines, *aéroplanes*, guns of all kinds, *aërial* torpedoes, hand grenades and mines—not to mention asphyxiating gases—their inventive capacity would be exhausted. Yet,

no doubt, other things still more terrible will be developed before the end even of this war. By making war as destructive as it is, the engineer has accomplished much in the cause of peace. Who can doubt that when the present conflict comes to an end and all the losses in all the countries are tallied up, any nation in the world will ever again want to bring into action the fearful resources of the engineering profession?

However interesting these various developments are to the engineer, I am sure most of us would very much prefer to use our brains in peaceful operations, in which there is, certainly, an ever increasing field.

At the same time, it is wise, under conditions that exist, that countries should be prepared for war, from the point of view of national insurance. It is certainly preferable to pay an insurance policy of this kind to the organization of an army and a navy and that of the engineers, than to get caught in an unprepared state with the result of having to sacrifice thousands upon thousands of lives in the way that England has done. If England had been as well prepared on the land as she was upon the seas, it is very doubtful whether there would have been any European war at all, and I feel quite sure that, although her insurance policies might have been high, they certainly could not have approached the millions upon millions which have now to be spent to meet this terrible war after it has come upon her, not to mention the sacrifice of her best and bravest sons.

I hope that my countrymen will take to heart the counsels of our great ex-President, Colonel Roosevelt, in this respect. No one more zealously or with so much intelligence as the late Lord Roberts warned the British public what would be the results to England in the event of a great European war, if they did not adopt national service, or at least a modified form of it. Ex-President Roosevelt has, for years, been warning the American public in much the same way as Lord Roberts warned his countrymen, that "In times of peace, prepare for war." I certainly hope that his counsels will be taken most seriously to heart, and that by so doing an enormous catastrophe, similar to this European war, will be avoided by America.

The following is from the Boston *Daily Advertiser* of November 29:

That the world will look to the United States for the capital required in part for its rehabilitation is asserted by Charles A. Stone, of Stone & Webster, who has been made president of the newly-formed \$50,000,000 American International Corporation. The formation of the great concern marks the entry of the United States to the sphere of world developer, as she already has been in part a world banker.

Mr. Stone said last night:

"The great effect that the events of the last year and a half will have on international financial and commercial relations brings new responsibilities and opportunities to this country.

"It will be many years before Europe can provide, as she has so largely done, the capital that the world needs for the development of its business. There are already many urgent demands that we render, as far as we may, the service that Europe has hitherto rendered, and that the people of the United States use a part of their abundant credit to finance the needs and developments of countries no longer able to depend upon their former sources.

"Many of the demands for assistance will come from the great activities that have needed and will need large amounts of capital for plant. Just as we had to go to Europe for much of the capital necessary for our railroads, street railroads, electric developments, terminals, and other public facilities, so now the world will look to us in this country to render, in our turn, some of this service.

"This American International Corporation that is to assist in furnishing capital must study situations, analyze conditions and determine the soundness of undertakings. This is perhaps the reason for my connection. Boston and the older investment centers of the East have furnished much capital for the development of other parts of the country, and Stone & Webster, for some twenty-five years, have sought out communities that needed and wished semi-public improvements, and

after studying, analyzing and judging the soundness of the proposed developments, have interested those with capital so that the developments could be made. The experience in this work and the knowledge of essential factors will, of course, be of assistance in this broader field.

"There will be no change in the firm or business of Stone & Webster, except that the part of the organization having most to do with the study and analysis of business opportunities, will doubtless find a larger field for its activities than it has found of late years in this country.

"There is much that is promising in this departure in American finance, and one may easily imagine that with so strong a helping hand held out, the engineers of the country, its technically trained men and the enterprising developers may find in other countries, opportunities similar to those that have been so vigorously improved here in the last fifty years."

At the annual meeting of the Goodyear Tire & Rubber Co. of Akron, Ohio, we note that F. H. Adams was elected to the office of treasurer.—Eighty-eight is getting ready to do its part in the coming anniversary celebration and great Technology Reunion. Remember the dates, June 12, 13, 14, and plan your engagements accordingly.

1889.

WALTER H. KILHAM, *Sec.*, 9 Park Street, Boston, Mass.

Revised addresses since the Class Book was issued are as follows: Rev. Chas. Edward Beals, 27 Sever street, Worcester, Mass.; Almon E. Norris, 47 Gibbs street, Brookline, Mass. Please note these now in your copy so that there may be no mistake.

The great Tech reunion will be held on Monday, Tuesday, Wednesday, June 12, 13 and 14, 1916. This being the occasion of the opening of the New Institute buildings as well as the fiftieth anniversary of the Institute itself, it is planned to make it the largest event in Technology's history. Tentative plans include class dinners, a banquet, an enlarged Nantasket trip, a monster evening pageant on the new site and elaborate ceremonies for kissing the Rogers Building good-bye. '89 will be expected to provide a stunt at Nantasket and possibly other features; no member can afford to miss the show. The secretary recommends that out-of-town members engage hotel accommodations early.

At the secretary's urgent request Whiting has contributed the following to the "Colyum." Will not some other classmate contribute next month?

The trials of Americans who were caught in Europe at the outbreak of the war is such an old story that I cannot believe that my own experiences, at this late date, will be interesting to my classmates, but our persuasive secretary tells me that I am wrong and, moreover, he is short of copy for the REVIEW—so here goes!

The immediate reason for my going to Europe in the summer of 1914 was to attempt to sell one of our plants to the Uddeholms Aktiebolag, the largest of the old feudal iron and paper trusts of Sweden. We reached Stockholm late in July and, with great sagacity, I made an appointment to meet the president of the company at his office in Uddeholms (a town in central Sweden) on the morning of August 1, which, as everyone knows, proved to be the day when war was declared between Russia and Germany—hardly a propitious time to close a contract. Our meeting was held as scheduled and between a hail of long-distance

telephone messages of world-disturbing events, cablegrams revoking foreign orders and other interruptions such as might well distract any ordinary manager, I managed to tell a portion of my story. Four days later, on August 4, I was again in Stockholm, this time to present the matter to the directors of the company, and that afternoon, an hour after word had reached us that England had entered the war, the contract was closed. At the end of the meeting I could not resist the impulse to express to the directors my admiration of their courage in entering into new obligations on the outbreak of a world-wide catastrophe, to which the president casually replied, "Our company was established in 1402. We have been through more than a dozen wars. The one just declared may be considered merely as an incident in the life of our corporation." Is there anyone else living who considers the present war "merely an incident"?

We had stayed in Uddeholms with a young engineer whom I had previously met in America. He proved himself an extremely good host, even to the point of going to the station to bid us good-by, when, on August 2, we started on our return trip to Stockholm. After the train had pulled out we waved our hands in parting and then, settling ourselves comfortably in our compartment, we wondered how many years it would be before we should see our friend again. Sometime later we noticed through the car-window a cloud of dust in the distance and looking closer made out a man on a motorcycle dashing towards our train. In a moment he was alongside. We saw him throw his motorcycle into a ditch, swing himself on to our now rapidly moving train and then, to our astonishment, make his way, covered with mud and dirt, to our compartment. It was our host of Uddeholms. No sooner had we left than he had been called by long-distance telephone and ordered to report in Stockholm for military duty without an instant's delay. He had shouted a word of explanation to his brother, grabbed his hat and leather jacket, jumped on his motorcycle and started to catch the train that we had taken. All records must have been broken in his wild dash across country, for in less than two hours he overhauled our express! Soon the train began to fill up until, when we at last reached Stockholm, it was crowded to overflowing with citizen soldiery.

Stockholm was a changed place. We had left it a peaceful, happy city, pursuing its normal life. We found, on our return, the banks closed, the shops deserted and the streets thronged with depressed and excited people. Within three days Sweden had mobilized its entire army of over three hundred thousand men, which, with their families and friends, transformed Stockholm from a city of a few hundred thousand inhabitants to one of over one million people. Men and women slept in the parks, the hotels were crowded, the railroad stations had become bedlams of confusion. To make matters worse, streams of refugees came north from Germany and south from Russia to meet at Stockholm, tired, destitute and hysterical. Many of these were Americans and they immediately headed for the American Legation in the hope of there attaining succor and advice.

And the Legation responded to the best of its ability to the extra demands made upon it. Official duties prevented the secretary in charge from directing the work of relief, so a committee of Americans organized and volunteered for the service. I was one of these and for three weeks my job was to sit, each day, behind a desk in the Legation while a more or less continuous stream of hysterical women and broken-down men came, one after another, to tell me their stories and ask my advice and help. Most of the tales I listened to were heart-rending; stories of deportation from Germany without bag or baggage, of being separated from friends, with no money, of illness, of harsh experiences in a strange and overcrowded land. Some of the cases could easily be disposed of through the loan of a small sum, others required a personal investigation and not a little delicacy and tact, while a few required a firm hand to prevent the dissipation of our slender funds. Many of the stories made the tears come—taught me that I could cry again. A few cases had their amusing side—as when a troop of American Indians, six men, five women and two paposes, walked one morning, bag and baggage, into the Legation and sat down—kerflop—upon the drawing-room floor. These aborigines had been touring the smaller cities of Europe as a second-class "Wild West Show" under German management and when the war broke out the German management was mobilized, leaving the Indians stranded in the center of Sweden without money,

friends, or a knowledge of the country. Eighty miles they had walked to the house of the "Great White Father" whose protection they sought. We found, at last, a place for them with the Salvation Army and just as we were leaving Stockholm I had the joy of seeing them march down the main street of the city, bedecked in all their paint and feathers, beating big drums, striking tom-toms and singing at the top of their voices in good United States, "Hallelujah! Hallelujah! Amen!"

At last we left Stockholm for England, traveling by the way of Norway, and booked passage for Newcastle on a little tramp steamer. An unforeseen occurrence prevented us from sailing on her, however, which was fortunate, for the steamer in question struck a mine in the North Sea and went down with all hands on board. But we did sail on the following day on a larger steamer chartered to carry thirty-six people but having on board one hundred sixty-four men, women and children—a destitute lot. It was a rough passage of three days. More than once I almost wished that we might strike a torpedo and be relieved of our discomfort. But at last we sighted England—calm, unhysterical, confident England—and no lights on shore ever looked half so friendly and so bright as did those of the "Snug Little Kingdom" that night. A month later we were sailing into Boston Harbor—and the rotten odors from the old fish wharfs seemed very, very sweet.

1890.

GEORGE L. GILMORE, *Sec.*, Lexington, Mass.

The grand Technology alumni reunion will be held Monday, Tuesday, and Wednesday, June 12, 13, and 14, 1916. No Tech man can afford to miss it or fail to be present at the dedication of the magnificent new buildings on the Charles.

As our regular twenty-fifth anniversary reunion was postponed from this year, we expect you all to make a special effort to be present. Our class reunion will be the Friday, Saturday, and Sunday before, June 9, 10 and 11, so you must plan for a week at the Hub. Forget your business and cares. Pack your bag and renew your youth. It will be a great time.

Our plans are not as yet completed, but we shall probably leave Boston Friday morning in Hayden's yacht for a trip to Plymouth. Then through the Cape Cod Canal, and will spend a night or two at some good place on the Cape, returning in time for the festivities. Full particulars will be sent you in the next issue of the *Tea Kettle* that will appear in December or January. But meanwhile chalk up the date and tell all other Tech men, whether of Ninety or not.

There will be something doing every minute, and such a reunion can only come once in a lifetime. Any suggestions will be most welcome to your secretary.

Incidentally we are to give a five-minute stunt on Tuesday at Nantasket. You remember that at the first reunion in 1904 we gave a cake walk in costume that took the palm. Our picture was used in sending out the call for the 1909 reunion.

Now we want to keep up our reputation, so if any of you can think of something that will be a credit to Ninety, do not delay but write to your secretary at once.

We may be getting old, gray, and bald, but as yet we are not aware of it, and next June we must prove it to the rest of the alumni that Ninety is still in the limelight as of yore.

Suggestions of any sort or any letters for the *Tea Kettle* will be most welcome. Your secretary has been so overcome since you presented him with that pearl scarf pin last June that he has been unable to get down to earth again, and really needs assistance from you all. Now see if you cannot hole a long put, help out, and get busy.

Charles Hayden was a member of the dinner committee for the twenty-fifth annual banquet of the Boston Real Estate Exchange at the Copley-Plaza, December 22.—In November the Technology Club of New York received a telephone call over the long distance wire from A. R. Wilson from San Francisco, Cal., extending his greetings and wishing to be remembered to the class of Ninety. We trust that by next June he will be able to land in person with us rather than by voice alone.—Charles Hayden has been elected director of the Philadelphia Company, and the Duquesne Light Company, of Pittsburgh.—Calvin W. Rice served on the jury of award in the judging of general machinery at the Panama-Pacific International Exposition.—C. W. Sherman is serving the town of Belmont on its Water Board.—Willis R. Whitney delivered a lecture in Boston, December 22, before the Massachusetts Reform Club, on the subject of "Preparedness."

We have recently learned that Ernest P. Whitten of our class died on the 17th of June, last. Whitten was with us only during our freshman year and was corporal in Company C. Since that time nothing has been heard from him until the news of his death reached us. His home was in Roxbury, Mass.

1891.

H. C. FORBES, *Sec.*, 88 Broad Street, Boston, Mass.

FRED A. WILSON, *Asst. Sec.*, Nahant, Mass.

It is interesting at this time to take notice of one of those imaginary conversations which have been published in book form by another writer. This one was carefully abstracted by one of our men during a fit of abstraction. The "might have beens" always have a historical interest—and Ike now clamors for reminiscences:

"But, Andy, think what it will mean if you give us a good start at this time," said Dick, as he looked earnestly at the steel magnet. "As I told you before," replied his companion, "I wouldn't give a penny scots to any competing concerns situated side by side." "Well," said Dick, with a sigh, "I must be moving to more promising fields. Couldn't you give me a carfare to see me home, Andy?"

"By the sign of the Thistle, Dick, you could ask the fur coat off my back without turning a hair; but we are countrymen and should part on good terms."

"To refer to the subject once more, Andrew, just think about our present conditions and needs. We are now in a position to enjoy all the excesses of the Haywards without partaking of their intellectual life."

"You're right, Richard, it never struck me in that light before. Shut your eyes and tell me how much ye dare ask for." "Since you press me," said Dick, "let me say that if you have the amount about ye, how would two and a half millions do?" "Good guess, Mac, you sized me up to a copper, say no more about it,

it's yours." "Andrew," replied Richard much overcome, "how can I express my thanks and appreciation? May I attach your photograph to the gift, as all the boys will be anxious to know their benefactor?" "No," said Andy, "my identity must be veiled—I was going to say hidden; but you must say that I am not a graduate of your institution; that I am not a Massachusetts man; that I play golf when in Scotland; that I am familiar with the steel business; and that my weakness is libraries on the half shell, so to speak; I give one half, you raise the other half; but beyond this say not a word. And now let us forget business. Suppose you and I invite Bill Taft and Jawn D. to play some golf at Skibo; you and Bill try your luck against Jawn and me, and we'll wear our Scotch clothes." "I agree to all but the last," said Richard, "for at a short distance we would look like a mixed foursome and it would injure the dignity of my institution." "Vera good," replied the unknown benefactor, "I'll see you later."

The '91 Class Book is progressing. Charlie says that while the motto of a New York paper is "All the news that's fit to print," his motto is, "All the fits that's news to print." So you see the censorship isn't very hard. We have one interesting note from V. A. Wright, who seems to be the big dog of the Otter Tail Power Company with headquarters at Fergus Falls, Minnesota—where is Minnesota anyway? Wright found the profession of architecture too worthy and respectable and also found some pails of water daily running to waste. Minnesota evidently has some water in it—is it salt? The Dayton Hollow Dam, out that way, is also his work—probably the hollowness is wholly in the name.

Charlie still kicks for answers to his class book circular. He says one quarter have answered; one quarter are reporting "still at work on it"—after three months—and one half are dead to the world. Wake up, boys—tell us things. As to photographs, he has about fifty taken in the last century—are we old?—and needs a lot more. Tell us all about business and home life—we want to know. What are your hobbies? Answer your correspondence. Get leave of absence for a week next June. Brace up—help us; help Technology. If we were in a recent China we should say to some of you. "Off with their heads." If we do not hear from you soon we will ask Tech to put "stars" against your names in the next Tech Bulletin of Former Students—or should it be coal shovels? Bert Kimball says it feels fine to have a star against one's name—he has just deceased, so he says—according to the Tech Register.—Billy Bryant, of course, has finally flopped over—was married recently and is to tell us how it happened in the Class Book. It may be in verse—gilded verse. But it's too bad so many fellows put off their disagreeable little things for so long.

The Class Book again—we shall heep hammering until we find time to buy an axe. Polite obituaries will appear for all who do not respond very soon. Are you a dead one? Now remember—reunion next June—big Tech dedication of new buildings—big 1891 Class Book. Remember that 1916 can't get along without '91; '91 is right in the middle of the date and will be likewise indispensable to all that transpires. But your present duty is to the Class Book. Don't be too laconic; any report like Finnegan's of the railroad accident—"off agin, on agin, gone agin, Finnegan"—

will be accepted, of course, but the obituary may still be deemed necessary; such as this—

When last seen in Boston he shook hands cordially, promised to be on hand in 1916, and to do more than his part for '91 and all that it undertook. He was very enthusiastic; he has not been heard from since and must, therefore, be beyond caring for earthly concerns—profitable or otherwise.

A midwinter '91 Swearee on Wednesday evening, December 15, at the City Club brought out Alley, Bird, Bowen, Bryant, Daggett, Douglass, Garrison, Goodwin, Hatch, F. C. Holmes, Howland, Kimball, Lawrence, A. M. Mansfield, Waite, C. H. Westcott, Wilson, and Young. Let's reverse the alphabet and put Young first; he looks youngest and is president, with all its worries. Bird is class artist at a high salary. Palmer got away before we nailed him down; some wife or other—we mean some party or other—his wife dragged him away to. Did she?

1892.

W. A. JOHNSTON, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

C. H. CHASE, *Asst. Sec.*, Tufts College, Mass.

Cards have been received by your secretary announcing the marriage of Howard Gilmore to Mrs. Agnes Kimball Baker, Monday, November 29. They will be at home after March 1 at 97 Hillside road, Brookline, Mass. Gilmore has the congratulations of the class.—Frank E. Perkins is showing his interest in developing local talent by assuming charge of the classes in architectural drawing at the Y. M. C. A. at Hartford, Conn.—Metcalf and Eddy (Leonard Metcalf) have now completed their work on American Sewerage Practice, a comprehensive work comprising three volumes—Vol. I, Design of Sewers; Vol. II, Construction of Sewers; and Vol. III, Disposal of Sewage. The last volume has just been put on sale by the publishers, McGraw-Hill Book Company.—W. Spencer Hutchinson was the chief speaker at a recent meeting of the Mining Engineering Society at the Institute.—The following clipping was obtained from the *Daily Iron Trade*, Philadelphia:

Ralph H. Sweetser, president of the Thomas Iron Company, Easton, Pa., whose able and progressive management of the affairs of that company since he took hold of them several years ago, has gained for him a prominent position in the pig iron industry, especially in the East, has been honored by his election as president of the Eastern Pig Iron Association. He succeeds Ledyard Heckscher, of the Alan Wood Iron & Steel Company, who served at this post during the past year. The election took place at Philadelphia on December 8.

Mr. Sweetser became president of the Thomas Iron Company, on August 1, 1913, coming to that position from the Columbus Iron & Steel Company, Columbus, O., where he had served as superintendent. Previous to that time, he had been identified with various other blast furnace companies.

The Philadelphia *Evening Bulletin* publishes in its issue of December 30 the following item in regard to the retention of C. E. Davis as chief of the Water Bureau of that city:

The intention of Mayor-elect Smith to retain Carlton E. Davis as chief of the Water Bureau is based primarily on a recognition of one of the most modest as well as most meritorious officers of the Blankenburg administration.

Mr. Davis has shown fitness as an intelligent engineer in addressing himself to both the problems and the routine management of the water service; he has also proved himself to be a satisfactory administrator, and his official behavior has been marked by cheerful common sense.

It would have been a shame to have turned out of office a man who is attending to his business as well as Chief Davis does, and it is especially creditable to the mayor-elect that he feels it to be his duty in this matter to rise above considerations of rotation in office. In doing so he shows a desire to be just to both the municipal service and to a deserving employee, and at the same time scores heavily with the public as well.

The attention of the members of the class is called to the "Grand Reunion" to be held next June. The various committees in charge are going to see to it that any previous reunion will be excelled so far as they are able. The general plans include various events to take place on Monday, Tuesday, and Wednesday, June 12, 13, and 14. This will be our *twenty-fourth* reunion and a special effort will be made to get out a large number of our class. Will not every Ninety-two man who reads this notice consider himself a committee of one to interest some other member of the class whom he may know well. On account of the dedication of the New Technology buildings it may be that many men can, or will, make a special effort to be present at this reunion. A special effort will be made to organize and delegate the work to suitable class committees so that the class will be properly provided for on the above dates.

1895.

WILLIAM H. WINKLEY, *Sec.*, 44 Kilby Street, Boston, Mass.

"The new automobile, about which there has been so much speculation, especially in trade circles, for the past several weeks, is a model Marmon," says F. E. Wing, New England distributor. "The fact that the new car was a Marmon, the product of Nordyke & Marmon Company of Indianapolis, was learned through a descriptive article which appears in this week's issue of *The Automobile*.

"The Marmon Company had planned to keep the car secret until the opening of the New York show, but inquirers got so insistent upon knowing the name of the 'mystery car,' as it has been termed, that the trade publication was allowed to give the description of the new car.

"The new Marmon is a distinct innovation in automobile construction, and marks the beginning of a new method of construction and the more extensive use of lighter materials. For the first time aluminum is used for motor cylinder construction. It is true that some experimenting has been done by engine manufacturers in putting out a few engines with aluminum used

very freely in the construction, but that the Marmon is the first car to use it as standard.

"The new car has been designated as the Model 34. The great feature about it lies in the fact that it is 1000 pounds lighter than the great majority of cars of its class."

The announcements of the tentative plans and program for the coming reunion of all Technology will be found in this number of the REVIEW. All members of Ninety-five are requested to take note of the dates, June 12, 13, 14.

1896.

CHARLES E. LOCKE, *Sec.*, Mass. Inst. of Tech., Boston, Mass.
J. ARNOLD ROCKWELL, *Asst. Sec.*, 24 Garden Street, Cambridge, Mass.

A class meeting of the '96 men around Boston took the form of a dinner at the Engineers Club on November 23, 1915. Present were: Rockwell, Joe Driscoll, James Driscoll, Jameson, Bakenhus, Wise, Maclachlan, Hersey, Partridge, Thompson, Knight, Harry Brown, Dorrance, and the secretary. By a very close vote the secretary and assistant secretary succeeded in securing their reelection for the ensuing year or years. The evening was devoted mainly to a discussion of the twentieth reunion next June, in connection with the All-Technology Reunion which will be held June 12, 13, and 14. It was voted that the class reunion be held at the club house of the Hartford Yacht Club at Saybrook, Conn., beginning Thursday, June 8, 1916, and continuing until Monday, June 12. An assessment of \$1 against each member of the class was voted, to replenish the treasury. The last previous assessment was in June, 1909, and amounted to \$1. The secretaries were empowered to appoint the necessary committees, and to go ahead with all arrangements for a glorious reunion. Another class meeting will probably be held some time in January. It is also hoped that a good gathering can be had at the annual alumni dinner, which will occur at the Copley Plaza on the evening of January 8, when there will be a chance to talk over reunion matters. Let every man keep the dates June 8 to June 12 in mind and promise himself that he will reach Saybrook even if he has to steal an automobile to get there.

The secretary, after the big bunch of class news in the last issue, has been unable to dig up very much for this number of the REVIEW.

Word has been received that Litchfield has been advanced to the rank of vice-president of the Goodyear Rubber Company.

The special keynote of this issue was announced to be work of Institute men for the public service and public good. A number of letters were written by the secretary to such men as he thought

could contribute, and the following are the replies that have been received:

F. C. Hersey, Jr., has served continuously on the Board of Water and Municipal Light Commissioners of the town of Wellesley since the year 1908, and as secretary of the Board since 1909. Two other Tech men are also on the Board, thus making it an all-Technology organization. During the last seven years a considerable amount of important work has been done in making extensions and additions to the electric light plant and to the water works, both of which are owned by the town. Hersey has proved a very valuable man on the Board and has given the benefit of his technical knowledge and of his experience gained in his special line of manufacturing meters. He has made it a point to attend all water works conventions in the United States, and the knowledge gained from these trips has been of much value to the town.—George K. Burgess has been with the United States Bureau of Standards for many years. Burgess received his doctor's degree in Paris in 1901. He has published many papers as follows: "Melting Points of the Iron-Group Elements by a New Radiation Method"; "Methods of Obtaining Cooling Curves"; "The Estimation of the Temperature of Copper by Means of Optical Pyrometers"; "A Micropyrometer"; "Melting Points of the Refractory Elements—I. Elements of Atomic Weight from 48 to 59"; "Critical Ranges A_2 and A_3 of Pure Iron"; "The Emissivity of Metals and Oxides—I. Nickel Oxide (NiO) in the Range 600 to 1300° C."; "Electrical Resistance and Critical Ranges of Pure Iron"; "The Emissivity of Metals and Oxides—II. Measurements with the Micropyrometer."

Recent publications: "The Measurement of High Temperatures, 3d ed., with Le Chatelier; this is the standard work on pyrometry; it has also been translated into German by Prof. Leithouser. "Characteristics of Radiation Pyrometers," with P. D. Foote. "A Study of the Quality of Platinum Ware," with P. D. Sale. "An Investigation of Fusible Tin Boiler Plugs," with P. D. Merica; this investigation has shown the imperative need of specifying strictly pure tin in fusible plugs. "Observations on Finishing Temperatures and Properties of Rails," with J. J. Crowe, H. S. Rawdon, and R. G. Waltenberg; there is also a forthcoming paper in the *Washington Academy Journal* on "A Supposed Allotropy of Copper," with I. N. Kellberg. Two papers have been published in collaboration with Sir Robert A. Hadfield on "Sound Steel Ingots and Rails," one presented before the American Institute of Mining Engineers, the other before the Iron and Steel Institute of Great Britain.

The Metallurgical Division of the Bureau of Standards, organized in July, 1913, under the direction of Dr. Burgess, is occupied with the study of many problems concerning the properties of metals. There is being carried on in coöperation with

the manufacturers a comprehensive investigation of bronzes and brasses used in engineering construction, with the object of determining the limitations to be placed on specifications of such materials.

Another important line of work being carried out is the experimental and statistical study of the causes of failure of railway materials such as wheels, axles, tires and rails. There is in press, by Drs. Burgess and Merica, a Technologic Paper on Foreign Specifications for Railway Materials, which will be of use in comparison with the American practice.—M. S. Jameson entered the employ of the Massachusetts Public Service Commission in 1915 to assist in making studies and investigations in connection with their report to the legislature on the transportation needs of Boston. Six months were spent in getting data to cover the traffic situation on all steam and electric lines running into Boston, and in scheming on possible changes of routes, establishment of new electric lines, rearrangement of stations, etc. The commission made its report in April, 1915. Since that date his work has been largely in connection with electric railways, which have petitioned for permission to increase the fares. In deciding these cases, the commission considers the cost, or value, of the property as being capital upon which the road is entitled to earn a reasonable return. In other words, a physical valuation is to be made, and it has fallen to his lot to assist Engineer Hayes of the commission in making an inventory of the property and working up the amount of capital represented. The roads investigated were the Blue Hill Street Railway, the Norfolk & Bristol, the Warren, Brookfield & Spencer, the New Bedford & Onset, and a portion of the Bay State Street Railway. There is a large amount of miscellaneous engineering work constantly coming along, but the above outline covers the largest single jobs.—Henry Cummings, who is with Wells Brothers Company, states that the only matter of any public nature which they have been doing is in connection with the city; that is to say, they took the contract to erect for the city, the City Hall Annex Building, Court street, Boston, Mass. They signed the contract on the twenty-second day of August, 1912, completing same January 1, 1914, so that some of the departments in the old building moved into the new buildings on that day. The amount of the contract with the city was \$743,510. The building is rather an attractive structure being of first class fireproof construction, steel frame, limestone exterior, concrete floor construction, terra-cotta partitions and kalamein metal interior finish, making the entire structure as fireproof as it is possible to do under modern methods.—N. C. Grover, '96, is chief of the water resources branch of the United States Geological Survey, with the title of chief hydraulic engineer. This branch is one of the three field branches into which the Geological Survey is divided and employs about seventy-five engineers, geologists and

chemists who are engaged in the collection of records of stream flow, in the preparation of reports on the quantity and availability of ground waters and in the investigation of the quality of both surface and ground waters especially with reference to their mineral contents. Extensive coöperation is arranged with other Federal bureaus, with states and municipalities. The results of the work constitute the base data as to water supply for practically all developments of the water resources of the country for power, irrigation, and municipal use, and are published in the series of water-supply papers of the Geological Survey. These papers may be obtained without charge on application to the director of the survey, or, after the free edition is exhausted, on the payment of a nominal price to the superintendent of documents, Washington, D. C.—Charlie Moat is in the Laboratory of Hygiene of the Vermont State Board of Health. His work consists of laboratory work on the quality of the water supplies of the state, both public and private supplies being examined. He also makes occasional sanitary inspections of these supplies. The laboratory work on foods and drugs, including milk, is done in this laboratory. Besides this he gives talks to medical students, women's clubs, etc., on public health work. Anything to educate people along public health lines.—Lythgoe is doing much the same work in Massachusetts. His connection with the State Department of Health began in November, 1897. For ten years he was assistant analyst working under Mr. Albert E. Leach, and from August, 1907, until the State Board of Health went out of existence in 1914, he was the chief analyst of the Board. The new administration has made him the director of the division of food and drugs. In carrying on this work he has three laboratory assistants, four food and drug inspectors, three veterinary inspectors, two cold storage inspectors, and three clerks. The work consists of enforcing the laws relative to the adulteration of milk, food and drugs, relative to the inspection of slaughtering, and relative to articles kept in cold storage. The character of the work could be, perhaps, better understood by a perusal of the annual report of the department.—Myron E. Pierce has varied the ordinary practice of law with a number of public projects. As chairman of the Executive Committee of the Boston Common Society, he has just led a successful fight in the municipal election for the preservation of Boston Common. He took the position that as the Common had been preserved for 275 years as a public park and was more closely associated with the struggle for liberty than any other open space in America, it ought not to be encroached upon for street widening purposes or any other unless an overwhelming necessity were shown. No traffic experts testified that the widenings were needed, but, on the other hand, several declared that the difficulties on the border streets were due chiefly to pedestrians and to the entering and leaving of side street traffic, neither of which causes would be

removed by widening the streets. His position was upheld by the citizens of Boston to the tune of about 47,000 to 27,000.

Mr. Pierce for the last five years has acted as counsel for the Massachusetts Milk Consumers' Association in their effort to give the State Department of Health the ordinary legal powers of State Boards of Health over the milk supply. He has twice succeeded in securing the passage of a bill, in each case only to have it vetoed by a governor, looking for the farmers' vote. One of the reasons given for the defeat of Governor Walsh was his veto of this milk bill. In spite of nominal defeat the association has contributed very materially to the education of producers and consumers in the necessity of exercising greater care in the handling of milk.

Mr. Pierce is also secretary of the Phillips Brooks Statue Committee, organized to secure a worthy statue of Phillips Brooks for Boston. The committee hopes to raise funds to have the statue, by Bela L. Pratt, now in clay, cast in bronze and placed somewhere in old Boston. Tech men will remember that Phillips Brooks preached in Huntington Hall for several years after the burning of the old Trinity Church on Summer street until the present church was completed. He more than once preached the baccalaureate sermon and undoubtedly exerted a very great influence on our students.

Charlie Trout replied in part as follows:

It appears to me that you are under a misapprehension in regard to my activities. I am just working for a living like any other self-respecting man, and am not blessed with the desire to toot my own horn. If mankind is getting any benefit out of my activities I do not know it and will stop the robbery if I find it out.

It is too bad that the next issue of the TECHNOLOGY REVIEW will have to get along without any paragraph about yours truly.

In commenting on the foregoing, the secretary wishes to say that Charlie is under a misapprehension in thinking that he is not doing any public good. He certainly has helped the secretary by supplying the above ideas, and the secretary feels sure that all '96 men will be interested to read Charlie's breezy paragraphs. —Guy Morrill, who is pastor of the First Presbyterian Church at Canandaigua, N. Y., replied that the request reached him so late that he was unable to supply material by the date set, but it is hoped that he will have something to say in the next issue of the REVIEW.

Letters were also sent to G. F. Ashton, R. E. Bakenhus, Dr. Coolidge, S. D. Gage, E. C. Hultman, J. L. Matthews, and J. G. Melliush. Bakenhus replied by telephone that he was extremely busy but promised to try to send some notes regarding his work in connection with the Navy, and especially at Panama, but these notes have not been received. The other men did not send any reply whatever.

1897.

JOHN A. COLLINS, JR., *Sec.*, 67 Thorndyke Street, Lawrence, Mass.

The first dinner of the season was held at the University Club, Boston, on November 17, and was a most successful affair, twenty-three men being present. After the dinner, Prof. Harrison W. Smith, '97, gave an illustrated talk on his recent trip to the South Sea Islands, and particularly Sarowak. It was a great treat, indeed, and the men thoroughly enjoyed it. Those present were Bradlee, Breed, Dougherty, Sawtelle, Worcester, Carty, Currier, Estabrook, Jackson, A. W., Jackson, H. D., Learned, Lawler, Vinal, Bliss, Hubbard, Mansfield, Alden, Atwood, Burrill, Loveland, and Humphreys.

The attention of the class is called to the announcements in this issue of the REVIEW regarding the coming reunion. This great event will be entirely unique, in that it will include the dedication of the New Technology and, what is now of more interest from the standpoint of sentiment, to the old graduates—the farewell to the Old Technology. These two ceremonies can never happen again, and for that reason must be given a setting that will forever remain clear in the minds and memories of Tech men the world over. Ninety-seven must do her part and a little more, and it is none too early to get to work on the plans and specifications. Let those in the larger centers get together, boost up each other's enthusiasm, with the end in view of turning out a record-breaking attendance at this, the greatest event in Technology's history. Remember, for many of us, God willing, this is to be the dedication of our sons' Alma Mater.

1898.

A. A. BLANCHARD, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

The editor of the REVIEW has asked the class secretaries to collect for this issue accounts of public service being performed by '98 men. Knowing the characteristic personal modesty of members of the class the secretary has refrained from asking any of them to tell of their own good work.

But it seems in order to call to mind the good work that we know is being done.

First and foremost comes Charles-Edward Winslow, in charge of the division of publicity and education of the New York State Department of Public Health. We know that he puts his whole energy into work for public betterment whether in the line of his official duties or in private capacities.—Seth Humphrey does not say much about it but he works to good effect in the Boston Associated Charities.—We must not forget our college presidents, Hughes of Miami University and Godfrey of Drexel Institute.—Babson did not join the Ford Peace Mission but perhaps he is doing more

in connection with the "Society to Eliminate Economic Causes of War" which he has organized and which is to hold a convention at Wellesley Hills, Mass., in January. Reading some of Babson's recent articles in the newspapers, we are not able to see a very sportsmanlike attitude in the idea that this is our grand chance as a nation to take advantage of the misfortune of the belligerents, and acquire the financial leadership of the world. However, we hope we may not have correctly interpreted the meaning of his words.

According to the *Motion Picture News*, New York, Babson is turning his attention to the screen, and is preparing some of his work to instruct the public by this popular method. We quote as follows:

Roger W. Babson, the noted statistician, has allied himself with the Paramount Pictures Corporation in the capacity of associate editor of the Paramount Newspictures, and his works are now being filmed for presentation at Paramount theatres.

It may seem at first glance that statistics do not provide a very fertile field for the cameraman, but this, it developed in a talk with Mr. Babson, is not the case. "Probably there is nothing so uninteresting to the average man as dry statistics," Mr. Babson said.

"He cannot get very excited when he reads on the printed page that five hundred and sixty-six million cans of beans are sold in the United States and Canada, or that in New Jersey there are 50.4 per cent. more mosquitos to the square mile than in any other state in the Union, but by the free use of illustrations I have been able to circulate my books quite largely, and I am informed by public libraries that they are in considerable demand.

"Let us take the European war as an example. There are few in this country who are not deeply interested in the question and there are few who after thinking about the matter will deny that statistics are absolutely necessary in a study of the conditions which have brought on the conflict. The problem is to present them in a way that will attract and hold the attention and interest of the great public. We think that motion pictures will solve this problem.

"This all can be shown by means of animated charts, cartoons and trick photography in a way that the average man will remember. The causes that have brought on the war as well as its progress and its inevitable results can be carried to a larger number of people in a week than would read of them in years in books or magazines.

"The high cost of living is a sore problem. The prices of almost all commodities have, it is true, increased, but statistics will show that some communities are successfully coping with the situation, and the first of my films to be released through the Paramount Pictures Corporation shows this.

"Questions of such a vital interest as those which I have outlined can be asked and answered by means of our animated magazine which embraces many other features of interest to the great public.

"I first became deeply interested in the motion picture when on a visit to South America I encountered at several points the cameramen of the Paramount expedition, and it was then that I conceived the idea of adapting statistics to the screen. Investigations proved to me the advisability of allowing Paramount to handle these pictures, and when Paramount Newspictures were issued a place was found in them for me."

He is lecturer on statistics at his old college, special writer for the Curtis publications, *Saturday Evening Post*, *New York Times* and other periodicals, and he is a member of the American Economics Association. Some of his most famous and widely read books are "Business Barometers," "The Future of the Working Classes," "The Elements of Successful Investing," "Prosperity, How It Must Come," "The Future of the Railroad" and "The Future of Us Boys."

We must not fail to recall Mayor Weimer's fine example of doing one's civic duty in one's community. We don't know whether he now holds any municipal office in his home city, but we will never forget the effect of his talk at the fifteenth class reunion. We know that at least Ed Chapin and Maurice Delano shortly after began to take prominent part in their town affairs.—We cannot pass by our clergymen, Donald N. Alexander and Charles S. Dixon, in our list of servants of the public good; nor our physicians and surgeons, Clara E. Gary, E. W. Gehring, Harold W. Jones, John H. Lambert, Dorothy Reed Mendenhall, Frank L. Richardson, Frank W. Snow, Alice W. Tallant, and George H. Wright.—E. F. Ayers has been carrying on a vigorous movement for good roads in Oregon state.—Philip H. Dater, we noted in a previous issue, has performed important service in the Forestry Department in Washington.—R. W. Pratt must be mentioned for his board of health work in Cleveland, Ohio, and for his writings.—E. M. Weaver, as brigadier-general of the U. S. Army and chief of coast artillery, is an important personage today; nor should we fail to mention as performing a public service of international scope, Strickland, who is manufacturing motor trucks for the Allies and Porter and Kendall, who are superintendents of factories of the duPont Powder Company.

✱ The editor of the REVIEW wants to specialize in the next issue in reminiscences of Tech days. Ninety-eight has its share of them. All who read this please send in some anecdote of the days we like to recall.

Next June comes the BIG Tech Reunion which has now been twice postponed in order to coincide with the opening of the new buildings on the Charles. Put it down in your calendars as a positively unbreakable engagement—Monday, June 12, to Wednesday, June 14, inclusive.

Tuesday is stunt day at Nantasket. Candidates for the Stunt Committee please send in their nomination papers with one signature each. Anyone with a good suggestion will be elected to the committee.

1899.

W. MALCOLM CORSE, *Sec.*, 106 Morris Avenue, Buffalo, N. Y.
 BENJ. S. HINCKLEY, *Asst. Sec.*, North Station, Boston, Mass.

The definite dates for holding the grand reunion for 1916 have been set for Monday, Tuesday and Wednesday, June 12, 13 and 14. The tentative dates for our class reunion, which was to have been held last year but was postponed so as to coincide with the grand reunion, are Friday, Saturday and Sunday, June 9, 10 and 11.

Miles S. Sherrill is chairman of the reunion committee and Benjamin S. Hinckley, as assistant class secretary, is helping Sherrill with the arrangements.

Announcements will be sent out regarding the progress of the program from time to time.

It is especially urged that you plan to be present at both of these reunions for there is a big time planned for each one. Any suggestions that you may have regarding the class stunt for the grand reunion should be sent in promptly to the secretary. Do not forget that the grand reunion in 1916 is the occasion of the regular five-year reunion and also will mark the fiftieth anniversary of the opening of the Institute. The new buildings will be dedicated at this time.

Clancey M. Lewis, now secretary of The Manufacturers' Association, Seattle, and consulting editor of *Pacific Builder and Engineer*, received his first vision of public service when an undergraduate at Tech, where he conducted the first and probably the largest campaign in the student body for the financial support of foreign missions, and later became the president of Technology Y. M. C. A. He gave five years to educational missionary work in Canton, China. Since locating in Seattle he has served two years as secretary of the Municipal League, the non-partisan civic organization, is now first vice-president of it, and for one year was chairman of its city planning committee; has been consistently active in the movement for good roads, serving as a committeeman in the state organization, for the past two years chairman of the good roads committee of the Seattle Commercial Club, and secretary of the King county association; has manifested an active interest in social service and served on the publicity committee for the National Conference of Charities and Corrections, Seattle convention; has kept in touch with educational work through representing the Canton Christian College in Seattle and through the organization this year, under the auspices of the Parent-Teachers Association, of the first garden club in his suburban home community of Beaux Arts, Washington, where he has also represented his neighbors as chairman of the governing board of the community, and was here instrumental in establishing the single tax system to provide revenue for local improvements; and has contributed his share in time, money and official service for the good of M. I. T. as represented in the Technology Club of Puget Sound. In his recent work as secretary of the Manufacturers Association he has been assisting in the movement to affiliate the commercial bodies of the city and in the organization of a holding company for financing existing and new industries.

Henry C. Eaton was defeated for Republican nomination for mayor by a coalition of Democrats and disgruntled Republicans. He certainly has done his part in reference to civic work, as is shown by the following record: Active in civic affairs for fifteen years; board of aldermen, 1912, 1913, 1914 and 1915; president of Board, 1914 and 1915.

Ellery writes from Erie the following interesting letter on single tax:

Aside from my regular work as chemist for the Erie Forge Company, I am giving as much of my time as I can to the agitation for the single tax. As I have told you before, I believe it is a reform of fundamental and far-reaching importance. I believe it will appeal as such to the trained, scientific, truth-seeking mind of every Technology student or graduate who investigates.

Were I to say before the men of Course V, class of '99, that the ultimate effect of all effort in the field of chemistry is to make social conditions not better, but worse, I suppose I would be regarded as insane, and yet it is true. All inventions and improvements operate finally to benefit not the workers, but those who own the natural resources, and as the landowners receive more, the workers, whether employed as chemists or otherwise, must necessarily receive less.

Enormous fortunes accumulate in the hands of the few, and intensified poverty is the lot of the many. So must it be until we see clearly just why it is, and that the single tax is the way out.

Technology men should be in the lead in the fight for freedom and justice.

S. A. Courtis, of Detroit, is supervisor of the Department of Educational Research. His work is the measurement of the efficiency of teaching throughout the city and the efficiency of different methods and text-books used by the city, also, their vention of new methods and better adjustment of work.

In addition to this he has carried on for several years a series of coöperative investigations for the determination of standard scores in the four operations of arithmetic.—William H. Kimball writes from Davenport, Ia., as follows:

I have served the city of Davenport, as a member of the Davenport Levee Improvement Commission, which was organized for the improvement of the Mississippi River water front. I served as engineer member of this commission for a year, my term closing in the spring of 1912. Since that time I have served as consulting engineer for the commission. All of this service was without compensation.

I have also been serving this year as a member of the Davenport Sewerage Commission, which was organized to study the sewerage situation here and develop plans for its improvement. This work, however, is work which brings compensation.

Lawrence Addicks has been appointed to the Navy Consulting Board, representing the American Electrochemical Society.—A. R. Holliday sent us an article entitled "Rural Electrical Development in Indiana," from which the following conclusions are taken:

At the present time, the attitude of the public is distinctly hostile to capital. The rulings of the Indiana Public Service Commission have not been such that foreign capital is attracted to utilities in this state. The future is anything but assuring. Until the time comes when the outlook will be brighter, the rural electrical development of Indiana must be held in abeyance.

The commission should, and the companies interested must, educate the public to recognize these points:

First: No development beneficial to the public can be brought about without the investment of capital. Ample and sure returns must be guaranteed this capital to attract it.

Second: Ample returns mean such interest returns that there will always be ready money available for development.

Third: The incorrect theory of physical valuation for rate making purposes must be discarded.

H. J. Skinner reports that he is a trustee of the Beebe Town library, Wakefield, and also a member of the Wakefield Water and

Sewerage Board.—George R. Townsend reports a change in his connection with the Henry R. Worthington Works, Harrison. He is now secretary and assistant general manager of the East Jersey Pipe Corporation, Paterson, N. J.—Frank F. Fowle has just completed the editing of "Standard Handbook for Electrical Engineers," consisting of two thousand pages.

1900.

WILLIAM R. HURD, 2d.

RICHARD WASTCOAT.

PERCY R. ZIEGLER.

INGERSOLL BOWDITCH, Sec., 111 Devonshire Street, Boston, Mass.

When the members of the class receive this copy of the REVIEW, they will have learned that the grand Technology Reunion, to celebrate the New Technology, will take place June 12, 13 and 14 next. It will also celebrate the fiftieth anniversary of the opening of the Institute, and every member of the class should make an effort to attend. Already several fellows, who have not been back since they graduated, have signified their intention of being present and it will be a chance of a lifetime to renew the acquaintances of your classmates. The class committee will do all they can to make the reunion a great success, and it is up to the class to help them.

Letters were sent to seventeen members of the class for information for this letter, and although the secretary desired to hear from all of them, he is grateful to those who answered. Bill Stone did not answer the first letter so a reminder was sent and returned with an arrow pointed to the return address. As this was not put on by the Post Office Department, Bill must have used this method to throw the secretary off his track.

George O. Adams of Lawrence has been at the Experiment Station practically since he graduated, but owing to the reorganization of the State Board of Health he does not feel like writing about his work. He sees Ripley and French occasionally.—George B. Ford must be a very busy member of the class as the following will show:

Returning from Paris in 1907 my work followed along architectural lines for several years. This included work on the Wisconsin State Capitol, college buildings, hotels, commercial buildings, a few private houses, etc. Meantime, I had participated actively in propaganda work of various kinds relating to city planning, housing, social welfare and similar subjects. I was active in the organization of the National City Planning Conference, International Civic Bureau and its European tours, American Social Center Association, and engaged in the conferences and publicity work of the National Housing Association, National Municipal League, American Civic Association, New York Congestion Committee, New York Tenement Law Conference, Arts and Festivals Committee of the New York Neighborhood Workers, Municipal Art Society of New York, and became a director of the *American City Magazine* and Recreation Club. I became a member of the advisory committee on building code to New York City board of aldermen, and

of the Merchants' Association of New York committee in city plan. In 1910 I went as United States delegate to the ninth International Housing Conference in Vienna. During my work along these lines, I have been a frequent contributor to periodicals and newspapers.

In 1910, I began to engage actively in city planning, as expert to the City Planning Commission of Newark, Jersey City, etc., and as consultant to the Civic Improvement Association of Dobbs Ferry, N. Y. My work in Newark and Jersey City has covered a wide range of technical matters, covered by a number of reports published by the commission. In 1913, I became secretary and director of investigations to the committee of the Board of Estimate and Apportionment of New York City on the regulation of the height, size and arrangement of buildings. In 1914, I was appointed consultant to the committee on the city plan of the Board of Estimate and Apportionment of New York and to the two advisory commissions on city plan and on building districts and restrictions, which work is now being carried on along comprehensive lines.

I am a member of the firm of Geo. B. Post & Sons, architects, of New York City, chairman of the committee on town planning of the American Institute of Architects, and a member of several clubs here in New York, some of them related to my professional work.

To those who are interested in subway construction and have not visited Boston for some time, this letter from Wilbur W. Davis will be a great help when they come on for the reunion:

Hoping that it may be of some interest to some members of the class and others to know something of what has been done in the line of subway construction in the city of Boston, let me tell you a few facts for publication in the *REVIEW*.

The subways are owned by the city of Boston. The construction of each subway, together with an indication of the general route, and the appointment of the commission to carry out the work is authorized by the legislature. The cost is met by the issue of bonds by the city and before construction is begun the subway is leased to the Boston Elevated Railway Company, which pays a rental amounting to a fixed percentage of the cost of the subway.

Each subway is built in sections in varying lengths, depending on physical conditions, etc. It is built under contract let by competitive bids. The plans, specifications and inspection of the work are carried on by the engineering force under the supervision of the chief engineer.

The operating equipment such as tracks, signals, lighting, booths, etc., are installed by and at the expense of the Boston Elevated Railway Co.

There are now about 7.14 miles of completed subways in Boston and about 1.88 miles additional now authorized and under construction or design.

The latest addition to the subway system is the extension of the East Boston Tunnel. It begins in the Old Boston Tunnel near Washington street and runs under Court street, Scollay square, Bowdoin square, and connects with the surface by an incline in Cambridge street, between Chambers street and North Russell street. A loop track enables cars from East Boston to return without coming to the surface. It is expected that the extension will be opened about January 1, 1916.

The Dorchester tunnel will be finished in 1917, completing a line between Harvard square, Cambridge, and Andrew square in South Boston near the Dorchester line, by way of the Cambridge subway, Park street and the South Station.

The cost of all the subways in Boston to date, including the cost of construction, interest, administration, engineering, land damages, etc., is about \$29,000,000. It is estimated that it will cost about \$5,500,000 more to complete what is now authorized.

William C. Pickersgill has moved to Providence, R. I., and his very interesting letter gives an idea of the size of some public undertakings:

From 1906 to August of this year I was connected with the Catskill Water System for New York City the greater part of the time being in the Southern Aqueduct

Department office in White Plains. This office was the headquarters from which construction of about thirty miles of aqueduct, the Kenisco dam and the Hill View reservoir, was supervised. The contracts on this portion of the system amounted to about \$26,000,000. The aqueduct was largely completed before the end of 1913 and the Kenisco dam, a structure about 1,800 feet long containing some 900,000 yards of masonry, is being completed during this year. The Hill View reservoir which is at the southern end of the Southern aqueduct at a point where the aqueduct enters the city of New York, is also largely completed.

Upon the completion of the aqueduct work, and, on account of the advanced stage of the other portions of the construction being done in the Southern Aqueduct Department, our force was more or less scattered, and in March, 1914, I was transferred to the headquarters department of the Catskill system in New York City. There for nearly a year and a half I worked on the design of aqueduct gate chambers at the head of shafts on the city tunnel. We had all sorts of problems, some of the gate chambers requiring very heavy reinforced concrete and others heavy structural steel construction.

One of the interesting things in connection with the design of the Catskill system has been that the work is of greater magnitude than most work of this sort and a great deal of research work had to be done especially in reinforced concrete, slab and wall construction, also in reinforced concrete pipe. I was fortunate in having to do some work along both of these lines.

In the middle of August of this year I was appointed designing engineer for the additional water supply in Providence, R. I., and since that time we have been organizing forces and making preliminary studies and designs for this supply, the estimated cost of which is about \$10,000,000. As was the case on the Catskill system, there are a number of Tech men connected with the force, among them being Wm. W. Peabody, deputy chief engineer, Course I, '93, George T. Seabury, division engineer, Course I, '02, Ralph H. Stearns, assistant engineer, Course I, '01, and Karl R. Kennison, assistant engineer, Course II, '08.

On Thursday, November 18, the Providence Association of Mechanical Engineers and the Boston Branch of the A. S. M. E. had a banquet in Providence to which the Tech Club of Rhode Island was invited. This gave us an opportunity to renew old acquaintances and was a very successful meeting. Perhaps now that we are so near Boston we may be able to keep better in touch with your work and that of the Alumni Association.

Those of the class who have motored through New Hampshire have Frederic E. Everett to thank for the good condition of most of the main roads, and his letter tells how he looks after them.

In 1905 the State of New Hampshire passed state aid law authorizing the employment of a competent engineer to have charge of state work. Mr. Arthur W. Dean, a Tech man, I think of the class of 1893, was appointed state engineer. As my home was in New Hampshire I learned of this and immediately got in communication with Mr. Dean and through him I secured a position with the State Highway Department and came to New Hampshire in the spring of 1906. I worked with Mr. Dean until his appointment as chief engineer of the Massachusetts Highway Commission in 1909. My work consisted of making preliminary surveys of sections of roads in the various towns of New Hampshire that would be improved by the so-called state aid law. The work from an engineering point was rough, making lay-outs by eye, improving the old lay-out as best we could without too much expense, taking a profile and establishing a new grade by cutting down a hill where possible and filling hollows. The work was very interesting as we covered the whole of the state and ran against all sorts of conditions as to material and drainage problems. In 1912 Mr. H. C. Hill, who had succeeded Mr. Dean as state engineer, resigned to accept a more lucrative position and Hon. S. Percy Hooker, former chairman of the New York Highway Commission, was appointed state superintendent of highways. As Mr. Hooker was not an engineer, the state was divided into divisions and I was appointed one of the division engineers. I worked with Mr. Hooker as division engineer until his death in the spring of 1915.

My work as division engineer was similar to my work as assistant engineer, except that I had full charge of the division, not only as to the matter of surveys and lay-outs, but as to the class of road that was to be built, also the amount of money that was to be expended for maintenance and how it should be expended.

The legislature of 1915 abolished the office of state engineer and created a highway department under the charge of a highway commissioner who was to be appointed by the governor and council for a period of five years to have all the duties of the former state engineer, also the duties that heretofore had fallen to the governor and council as to the location of various state highways to be laid out in the future.

At Mr. Hooker's death I was appointed acting state superintendent of highways until such time as the governor and council should see fit to appoint a permanent highway commissioner. In August, 1915, it was my privilege to be appointed the first highway commissioner.

In the ten years that I have been connected with this department we have built practically 1,200 miles of highway, a large part of this being of the gravel construction. When we first began to build these so-called state roads we were somewhat limited as to funds and were anxious to make as good a showing as possible and for that reason we built the cheapest type of road we could find that would be of a permanent nature. It so happened that there were large deposits of gravel scattered throughout the state and naturally this material was used for road work. As time went on and we began to get results we discovered that the gravel type of road not only could be built much cheaper than any other type but could also be maintained for half the expense of the macadam type of road, and was satisfactory for the traffic to which our roads are subjected except for a few cases on the trunk lines that are subjected to so-called city traffic.

Therefore, where we had begun to build gravel roads of necessity it has at this time developed into a policy with us. We have three main lines north and south through the state practically completed and we are now laying out a system of cross lines and connecting roads which will be built in the near future. We believe thoroughly in patrol system of maintenance and practically all our main lines are under a patrolman's care. The patrolman, as we term him, is equipped with one-horse team, dump cart and with a drag for dragging the gravel road, also the necessary small tools, such as hoe, rake, shovel, etc. A patrolman thus equipped can take care of from four to eight miles of road and do it in a satisfactory manner and much cheaper than it can be maintained in any other way.

If you should travel through New Hampshire, you would see these patrolmen all along the road. You would be able to distinguish them by the sign on the side of the cart labeling them as a state highway patrolman, also each patrolman is equipped with a staff or metal flag with his number.

We have a system of marking our main lines, which is a benefit to the traveling public. Three telephone poles each side of an intersecting road are banded with an eleven-inch band with a two-inch band of white or black at the top and bottom. The color of these bands depends upon the route which is being traveled. Our East side road is yellow with black bands top and bottom. The Merrimack Valley road is green with white bands top and bottom and the West side road blue with white bands top and bottom.

In connection with these bandings explanatory signs are placed at the state line and also at junction points explaining what the bands are and where they will lead to if followed. With this system anyone going through the state is enabled to travel continuously without asking advice by simply following the bands.

One of the class who hopes to celebrate with us next year is C. E. Smith, and his work in St. Louis sounds very interesting:

After spending several years in various parts of the country, I settled down at St. Louis in the spring of 1907 in the engineering department of the Missouri Pacific Railway Company, where I remained until May, 1915, filling the position of bridge engineer and later assistant chief engineer (acting chief engineer in charge of the engineering department).

In May, 1915, I decided to indulge a hobby which I have had a number of years to engage in private practice, since which time, have had my own office as consulting engineer and although I have not yet set the world on fire, have no reason to complain as I have been reasonably busy. My most interesting work at the present time is an investigation of the requirements of the city of St. Louis for a comprehensive river and railway terminal system, with the view of being prepared to provide terminal and switching facilities, publicly owned, in order to encourage the revival of transportation on the Mississippi River and its tributaries.

Have been looking forward to a trip to Boston for some time, but most of my business trips take me South or West, leaving little time for visits to the old haunts. Have made up my mind definitely, however, to go East at the opening of the new buildings.

In the East it has generally been considered that the law was the most lucrative business in Reno, but Tillinghast gives us another side of what can be done there:

I was very glad to receive a letter from you, especially as it came from "God's Country." After spending ten years of my life devoted to the cause of our Uncle Sam in advancing civilization into the far West, I terminated my services with the U. S. Reclamation Service last October, and am at present engaged in private engineering practice with headquarters in Reno, Nevada. During the past four years I have been engineer in charge of construction of the Lahoutan dam which impounds the main storage waters for the Truckee-Carson irrigation project in Nevada. The Lahoutan dam is one of the largest built by the Reclamation Service. I am sorry to state that the Reclamation Service which up to this year has been a grand institution, has undergone a complete upheaval. The funds have gone into the "Pork Barrel" and our Mr. Newell (the father of national irrigation in this country), who by the way, is an alumnus of Tech, has been forced out. After bringing a large organization to a state of efficiency, usefulness, and loyalty, it is sad to have it broken down by cold, unfeeling political influences. However, I trust that it will all work out right in the end.

Business is not very good in the West, nor is the time ripe for starting a new practice, but the indications all point to a prosperous new year.

Reno is a fine prosperous little city, delightfully located with an ideal climate. It still has its divorce colony but is not nearly as "bad" as painted. I trust in the not too far away future to take a trip back to old Boston and renew old friendships.

A letter from James E. Barker of Los Angeles gives another instance where politics have interfered with the honest conduct of public business and compelled good men to resign their positions in order to keep their self-respect. Barker is now trying to improve matters and later he will tell more about existing conditions.—Fitch is giving a course in advanced auditing at the Boston University.

On December 7 the class had an informal dinner and a bowling party afterwards. Seventeen men were present. Thanks to Russell the dinner was excellent, the only ones to find fault being the wives of some of those present, owing to a most delicious dish of fried onions which was served with the steak. Plans for the Tech reunion were discussed and Dick Westcoat was chosen chairman of the stunt committee. If anyone has some good ideas for the class stunt he should hand them over to Dick in Taunton, Mass.

Just before the dinner the secretary was interviewed by a

reporter from the *Tech* and in the next issue a short account was given. The reporters on the *Tech* are evidently being properly trained, as the interview was reported about as "accurately" as is generally the case in most newspapers.

After reading this letter mark June 12, 13 and 14, 1916, for a vacation to be spent with *Tech*.

1901.

ROBERT L. WILLIAMS, *Sec.*, 70 Waban Hill Road, Chestnut Hill, Mass.

As you doubtless know, the grand reunion in 1916 is to be held Monday, Tuesday, Wednesday, June 12, 13 and 14. It is the occasion of the fifteenth annual reunion of the class of 1901, the regular All-Technology five-year reunion, it will mark the fiftieth anniversary of the opening of the Institute, and it will be the time of dedicating the new buildings across the Charles!

Let every possible '01 man show up! We sure are going to have a good time and will have some special doings of our own. A committee will meet soon to make plans for our quindecennial celebration.

The class news in the April REVIEW will be made especially entertaining by reminiscences of Institute life contributed by classmates. So send in your stories as soon as possible. Litchfield says these stories will have to be very carefully edited but don't be scared by that for I will try to get them past the censor!

The secretary has just returned from a business trip to Halifax, Nova Scotia. While there he called on F. H. Sexton who is president of the Nova Scotia Technical College. In the course of the conversation he learned that Sexton is engaged in some activities which might be properly classed as social betterment work. He is a member of the executive committee of the Greater Halifax Central Conference which has just collected sufficient money to secure the services of a trained social worker whose chief duty will be to systematize and coördinate in a scientific manner the many charitable and philanthropic efforts of the city of Halifax. He is also a member of the Khaki Club of Halifax which opened its doors on Wednesday, December 8. The club occupies the whole of a large, four-story building in the heart of the business district and is supported by the citizens of Halifax. It contains a restaurant, dry canteen, reading rooms, writing rooms, card rooms, billiard and pool rooms. It has one floor for entertainments, concerts, etc. The club has no fees and is designed for the comfort and well-being of the privates and non-commissioned officers in the army and navy. Since there are over seven thousand men in the various branches of the service stationed at Halifax, the club should find an ample field for its efforts to compete with the saloon in attractiveness during the idle hours of the soldiers and sailors.

Sexton has also recently been appointed a member of the Returned Soldiers Employment Committee for Nova Scotia. This committee works in coöperation with the Dominion Military Hospitals Commission at Ottawa. Its duty is to find employment for the soldiers now returning from the front who have been so badly wounded that they are unfit for further military duty and to reëducate those who have been so badly disabled that they cannot pursue the vocations in which they were engaged prior to enlistment. This is a serious and delicate task and since Sexton is the only educationist on the committee it looks as though he would have a big part of the work.

J. F. Monaghan, this year's president of '01, has at last joined the benedicts according to the following item in a Lowell paper:

Mr. Joseph F. Monaghan, Tech '01, and a colonel of the Lowell High School regiment prior to that, was married Wednesday, November 10, to Miss Mary Quin Phelan, a graduate of the Massachusetts College of Pharmacy and a young woman with a wide circle of friends. The bride is a daughter of the late Dr. A. Quin Phelan. Mr. and Mrs. Monaghan will make their home at 61 Riverview avenue, Waltham, Mass.

The best wishes of the class for Monaghan! We hope to meet the bride next June.

J. BRADFORD LAWS

All of the class remember, I am sure, big, jovial, J. Bradford Laws and will be shocked to learn of his sudden death in an automobile accident last October. The following clipping from the *Cincinnati Times Star* given the details of the catastrophe:

"The accident indeed was unfortunate and shows that we cannot complete too rapidly the work we have begun of protecting all dangerous places along our country roads," said President Wesselmann of the Hamilton county commissioners, Monday, in commenting on the automobile accident Saturday night October 9, in which J. Bradford Laws, son of Harry L. Laws of 3003 Reading road, was killed, and Frederick C. Von Steinwehr of the Queen City Printing Ink Company, was injured. Laws' neck was broken and death, it is thought, was instantaneous.

The accident occurred on the Camargo pike just off the Miamiville bridge and at a difficult turn. Because of the dense fog the driver of the machine could not follow the roadway, according to the report to Coroner Foertmeyer. Langdon Laws, a brother of the man killed, was also pinned under the car, but was not seriously injured.

Others in the machine with Mr. Laws were George W. Noyes, secretary and treasurer of the Brunhoff Manufacturing Company; Stuart B. Sutphin, president of the I. V. Sutphin Company, and Mr. Laws's brother, H. Langdon Laws, and Von Steinwehr. The last named suffered a broken arm. The others were bruised by the overturning of the automobile. They had been attending the last formal affair of the Miami Club, a well-known organization near Miamiville, O. They were the second of a long procession of machines returning to the city. Word was sent to Mr. Laws' father, who is a trustee of the new general city hospital. An ambulance was sent at once, but it took three hours to reach the scene of the accident because of the fog. Coroner Foertmeyer authorized the bringing of the body to Cincinnati. He will visit the place later. Von Steinwehr was taken to the Jewish hospital.

Bradford Laws was visiting relatives in Cincinnati at the time of the accident. His home was in Cinclare, La., where he was in the sugar business. With his wife

and three children he came to Cincinnati two weeks ago on a visit. Following his graduation from the Massachusetts Institute of Technology in 1901 he went to Louisiana, where he built up one of the largest sugar plants in the entire state.

1902.

FREDERICK H. HUNTER, *Sec.*, 281 Park Street, West Roxbury, Mass.

J. ALBERT ROBINSON, *Asst. Sec.*, care Underwriters' Bureau of New England, 141 Milk Street, Boston, Mass.

The call for notes for this issue of the REVIEW laid especial stress on work done by Tech men for the public good; unpaid work was to be written up particularly. Now the November issue of the REVIEW was so late in spreading this word abroad that no returns in the desired line have come in at the time the editor demands our spiel for the present issue. Just to prove, however, that '02 is doing something for the future of this country we herewith report a few results of our efforts in this line. The esteemed editor of the REVIEW, being a bachelor, may not enthuse over the showing, but our "proud and happy fathers" will send up a whoop.

Our class president, Walter Fitch, has joined the p. and h. group with a son who arrived last spring, while Willard Brewster Nickerson, who came August 24, puts "Nick" into the fraternity.—Charles H. Foote is another of our recent additions, having arrived March 13th last.—Ralph Franklin has a son, Richard Boit, who was born August 25; so Ralph now has a girl and a boy.—Comins also reports a young son, and Rob Edwards has started his young family with a daughter, Esther Pastine, who arrived on November 22, 1914.—Other families to show recent increase are those of Joe Ballard, whose son, Joseph, arriving on September 4, completed two pair.—Borden has a second son, Charles Barry, of whom we have but just heard, though he came in 1912.—Rob. Brown can "call" Ballard as he has three of a kind—R. V., Jr., who is now four years old; Richard G., who is two and a half, and William Bradford, who has passed his first birthday by some months; Caroline Borden Currey, on April 4 last, brings the family of our former president up to three of a kind also.—Henry W. Cutter makes three children in another '02 family.—Theodore Joseph Desloge, on September 15, 1914, fills another hand of three jacks. Other families of three are Charles F. Gardner's whose third is a boy, just arrived the day before last Thanksgiving; Mendenhall's whose third is a daughter, Marjorie, just past two years old; and that of Mrs. L. Wallace Sweetser (Mabel Wall), Robert Pearson Sweetser, having arrived on April 15 last.—Proctor has a son, Robert Dutton, who came November 1 last, to match the Proctor girl; Robbins reports two daughters, Elizabeth, February 25, 1913, and Frances Motter Robbins, born September 29 of this year.—Doc. Williams has a second son, Seaton Sawyer Williams, now a year and a half old.

There has long been an idea that "Bill" Lewis had the championship of the class in the family line, but Mrs. Arthur Shurtleff, who used to be Margaret Nichols, has a daughter, Alice, born on August 15, bringing the Shurtleff family up to six, three girls and three boys. We cannot find any rules in Hoyle to settle this matter, but we think that Mrs. Shurtleff is entitled to the lead in point of numbers.

Now to take up other news: Adrian Sawyer has gone to Chicago to be manager of the Chicago office of the Geo. A. Fuller Company.—Howard Baetjer has left the Crown Cork and Seal Company and is now with the Mt. Vernon-Woodberry Mills Company, 506 Continental Bldg., Baltimore.—Everett has resigned his position on the Tech Faculty and has gone to Annapolis to be professor of construction at the Naval Academy.—Horr is now in Boston, with the Bethlehem Steel Company, at 141 Milk Street—Vietor has been heard from; he is doing newspaper and literary work at Oregon City, Ore., and resides in Milwaukee, Ore.—Gannett has resigned as engineer of the State Water Supply Commission and has opened an office as a consulting engineer in the Telegraph Building, Harrisburg, Pa.—Freddie Allyn is now in the Montreal office of the U. S. Steel Products Company, Bank of Ottawa Bldg.—Mrs. Sexton (Edna Best) is in charge of the Red Cross work in Nova Scotia and is very active on behalf of the troops going from that Province to the war, and in the care of the wounded who return home.

Edwards has moved from Portland, Ore., to Berkeley, Cal. His firm, Edwards & Lazell, have expanded, with branches in Spokane and Concrete, Wash., and the new office and laboratory in Berkeley, where Edwards is taking personal charge, as well as their original office in Portland. It is evident that they are finding an extensive field for their work as chemical engineers, making a specialty of lime and cement operations. Edwards' Berkeley address is 3d street and Bancroft Way.—Currey reports a quiet summer, "camping in the back yard" at his new residence, Hart-ray avenue and Grant street, Evanston, Ill.

Edwin Kimball is the latest benedict in the class. On November 3 he married Mrs. Mary Anderson Reinhart Corbin of Fredericksburg, Va. The wedding took place in Plainfield, N. J., at the home of the bride's brother. Kimball has been located these many years with the G-E Co. in Schenectady, and he and his bride will make their home in that city.

"Tention, Squad!" The editor of the REVIEW says that the next number is to take up the painful subject of "When I Was at the Stute!" Kindly count fours and every one of you send in something this time to help your secretary out in conducting this column. Also, remember your secretary will need the aid and coöperation of class members in the plans to be made for the great celebration next June. Bear the dates in mind, June 12, 13, 14.

1903.

MYRON H. CLARK, *Sec.*, 1790 Broadway, New York, N. Y.RALPH NUTTER, *Asst. Sec.*, Box 272, Lynn, Mass.

Mrs. William A. Cross of Jenkintown, Pa., announces the engagement of her daughter, Helen Cross Endres, to Mr. Ralph Waldo Eaton of Norwich, Conn. Mr. Eaton is the son of Mrs. Frank W. Eaton of Ringgold street, Haverhill, Mass. He is a graduate of the Haverhill High School and of the Massachusetts Institute of Technology and is now chief engineer of the Shore Line Electric Railway system, with headquarters at Norwich.—Walter M. Drury, general manager of the American Smelting & Refining Company for Mexico, took unto himself a bride during the past summer, and together they came East and made an automobile tour through New England on their honeymoon. They are now back home in El Paso, Texas.—On September 29, H. H. Fales was married to Miss Louise C. Mason of Providence, R. I. Mr. and Mrs. Fales will make their home at 287 East 18th street, Brooklyn, N. Y.—Harold Norton was married in August. Before his marriage he made a trip back home to Boston, and after his marriage he and his bride went to the Pacific Coast on their honeymoon. They are now residing at Globe, Arizona, where Norton has held the position of chief engineer for the Old Dominion Copper Company for many years.—T. E. Sears is recovering from an illness of typhoid fever.

Howard Scott Morse, Course I, entered the public service one year after graduation, as assistant engineer with the U. S. Reclamation Service, and for four years was on the Lower Yellowstone project as engineer in charge of the construction of a division of this project, the purpose of which was to irrigate about 65,000 acres of land in the states of Montana and North Dakota.

Next he served the city of Louisville, Ky., for four years as resident engineer on the construction of sewers, part of a \$4,000,000 system of new and relief sewerage and creek channel improvement. Following the Louisville work, Morse was selected by H. M. Waite, '90, then the city engineer of Cincinnati, to take charge of the Cincinnati sewerage department. In the two and one-half years during which he held this position, current work of sewer design and construction was greatly stimulated, and plans and methods were modernized and standardized and the quality of work done was raised to a high plane. In addition, a comprehensive investigation of sewerage conditions in Cincinnati was conducted with a special force of over a hundred engineers organized for that purpose. This investigation included, as a basis for studies and plans, the making of a survey of all underground structures within the city streets and a topographic map of an area of over one hundred square miles. These data are

proving invaluable in every department of the city's problems and will serve as the ground work for a city plan.

Morse is at present director of the Cincinnati Bureau of Municipal Research, an unofficial agency of the people, organized to conduct a non-partisan study of the methods and work of the city and county governments with a view to recommending such modifications and improvements as it believes will promote the efficiency and economy of municipal administration. He is also engineer for the Ohio Institute for Public Efficiency, Columbus, O., an unofficial organization covering much the same ground throughout the state as the Cincinnati bureau does locally. Morse announced the birth of a son, Daniel Polk, on October 6.

The grand reunion will be held Monday, Tuesday and Wednesday, June 12, 13, and 14, 1916. As this is the occasion of the regular five-year reunion; as it will mark the fiftieth anniversary of the opening of the Institute and will be the time of dedicating the new buildings, it is hoped that 1903 will turn out in great numbers to lend zest and enthusiasm to this most important week. We want everyone there, so make your plans now. There's nothing like beginning early.

1905.

GROSVENOR D'W. MARCY, *Sec.*, 246 Summer Street, Boston, Mass.
CHARLES W. HAWKES, *Asst. Sec.*, 246 Summer Street, Boston, Mass.

HELP!!!

Send me some class news ere I perish. Send it quick!

Yours truly,

I. W. LITCHFIELD, *Editor*.

Upon receiving the above urgent plea, the secretary and assistant secretary got busy, ransacked the files, and found just three items:

E. H. Lorenz is engaged to Miss Grace Norton of Chicago, and is to be married next June. (For his sake and ours, we hope he will wait until after the big reunion, for it would be too bad to miss it even to get married.)—Eugene Burton could not resist the call of mining and gave up his flourishing automobile business, at Canyon City, to become assistant superintendent of the Yak Tunnel at Leadville. His address is box 284, Leadville, Col.—The third and last item announces the formation of a partnership:

MR. SIDNEY TALBOT STRICKLAND

AND

MR. ALEXANDER FRANCIS LAW

ANNOUNCE THAT THEY HAVE FORMED

A PARTNERSHIP FOR THE PRACTICE OF
ARCHITECTURE UNDER THE FIRM NAME OF

STRICKLAND & LAW

WITH OFFICES AT 68 DEVONSHIRE STREET

Boston, November 8, 1915.

Telephone Main 1772

While these facts are interesting, they hardly fill the space '05 is accustomed to occupy in these columns; besides, Ike Litchfield, in a notice back in November, asked for news of fellows in public life, government work, or social endeavor of some sort. So the secretary and assistant secretary got together at the latter's house, where there is a 'phone of the unlimited variety, and proceeded to warm up the wires. If anyone in the local radius didn't get called up, they must have been at church. We found each man modestly reluctant to speak about himself. The only way we could get anything was to make a man's friends talk for him. The following items are the results of our gleanings:

Bob Lord won the fat man's race at the Cumberland County Fair last August, and strained a tendon in each leg. He has fully recovered, however, and is actively engaged in tanning hides at Gorham, Me.—Harry P. Charlesworth has had his picture widely circulated, along with that of Mr. Vail, in the epoch marking group celebrating the first transcontinental wireless telephone conversation. We were not able to get anyone who could tell authoritatively just what Harry's connection is with this wonderful achievement, but he is lined up at the back with the row of engineers who are undoubtedly responsible for it, and '05 is proud to see him there.—Bob Turner has been more or less closely connected with public work. After leaving the Institute he went through Boston University Law School, and entered the Massachusetts Bar. He served a year or two as alderman in Waltham, then as member of the state legislature for two terms, then as legislative counsel for the Boston Chamber of Commerce, which he resigned to take the position of Commissioner of Labor for Massachusetts. Upon the advent of a democratic administration, he retired to private law practice, and is making quite a name for himself. Bob rendered a lot of practical help to the alumni committee which secured the grant of state aid to the Institute against a stiff opposition. He also helped Ralph Patch get a bill through the legislature creating a superintendent of public works for the town of Stoneham, subject to the civil service. Upon calling Bob up to ask about it, he wouldn't say much about himself, but said Ralph Patch was now one of the city fathers out at Stoneham, and first as a member of the Board of Public Works, and then by this reorganization had been largely responsible for eliminating graft and putting the town affairs on an efficient basis.—Harry Whitney has survived many changing administrations as city engineer of Beverly, Mass. While politicians have sworn to get his scalp at various times, he is still firm in the saddle, and will probably remain until a Mexican venture, in which he is interested with his brother, develops to a point where it will take his full time.

Jimmie Barlow has been in public work ever since graduation. After a year as assistant at the Institute under Professor Swain, and another year with the Charles River Basin Commission, he

went to New York with the board of water supply as assistant engineer, and then as assistant designing engineer. He remained in New York several years and then resigned to accept a position as assistant to the director of the bureau of Municipal Research, Cincinnati. Later he was appointed principal assistant city engineer of Cincinnati. He remained there until the city engineer, Mr. Waite, was chosen city manager of Dayton, Ohio, and then went with Mr. Waite as public service director of Dayton, in charge of all street, water and sewerage affairs.

Barlow is a man of exceptional ability. He has already been offered several positions as city manager, of different cities, but thinks that for the present his duty is with Mr. Waite. With his wife and daughter, he was for several weeks this summer at his old home in Lawrence. The first day there, he was riding a motor-cycle when an accident occurred, and he was thrown, breaking his collar-bone and otherwise injuring himself. It was not an altogether enjoyable vacation for him, for he was obliged to return to Dayton with his arm in a sling.

Mr. Waite speaks of Barlow as one of the coming men in this line of public work.—George Hool has been teaching nearly all the time since his graduation. At first he started an engineering department in one of the southwestern universities, and later went to the University of Wisconsin, where he is now connected with the university extension courses. He has written two books on reinforced concrete, and has a third in preparation. These books are among the best on the subject ever written in this country, and are making a great name for Hool.—John Ayer writes as follows:

At the present time I am with the board of port directors, Boston, as assistant engineer in charge of the designing division. The contract for the largest dry dock in the world, to be built here in Boston, has recently been awarded to the firm of Holbrook, Cabot and Rollins, of which J. W. Rollins, '78, is president. The dry dock is 1,200 feet long, 120 feet wide at the bottom, and has 45 feet of water over the sill at mean high water. It is to be divided by a middle sill, so that a smaller ship may be docked without necessitating the pumping out of the whole dock. We are now getting out the detailed plans for this dock, as well as plans for the development of various other portions of Boston Harbor.

I have recently moved to West Medford, where most of my time at home is spent trying to keep John, Jr., from fatally injuring his playmates or being killed himself.

Bob Wise is another fellow who has been employed on public work for the greater portion of his time since graduation. He is now designing engineer with the board of water commissioners, Hartford, Conn., where an extensive water supply system is being built. Bob was married a short time ago and certainly looks as if housekeeping agreed with him. He says it is "the life" for him.—Kilborn Whitman, Jr., is helping build a large filtration plant in Cleveland. He and Wise were together for a long time with the board of water supply, New York City. "Whit" has recently announced his engagement, we understand.—"B. L." Johnson is associate geologist, U. S. Geological Survey, and when he isn't

running around Alaska or some other accessible place, is in Washington, D. C.—Oscar C. Merrill is chief engineer, forest service, U. S. Department of Agriculture. Sometime we will get a real story about Merrill and his work.—Charlie Clapp, while assistant state geologist for the Canadian Government, spent four summers in making a geological survey of Vancouver Island. Charlie is now state geologist of Arizona, and professor of geology in the State University at Tucson. Our informant says he runs a “Flivver.”—Roy Allen is treasurer and manager of the Coralbut Mining Co., and is erecting a mill for a zinc mine at Joplin, Mo., which he expects to have running by the first of the year.—C. W. Johnston is metallurgist with the Norfolk Smelting and Refining Co., of Norfolk, Va.—Bob McLean is now superintendent of the Carver Cotton Gin Co., at East Bridgewater, Mass.—Several of the fellows are in the gas business. Bud Folsom is now superintendent of the large Everett plant of the New England Gas and Coke Co.—Sid Cole is manager of the Wakefield Municipal Light Plant.—Francis Drake is manager of the gas department of the Lynn Gas & Electric Co.—C. R. Pritchard is superintendent of the Beverly Gas and Electric Co.—James Fouhy is assistant engineer of the New York State Public Service Commission, also instructor in the Brooklyn Polytechnic Institute.—John MacManus and Norman Gerhard are assistant engineers, board of water supply, city of New York. Mac is at Kingston, and Gerhard at Yonkers.

At one time there were seven '05 men in the patent department at Washington. Bob Morse and Maurice Weaver are our only representatives in that branch of the government service now.—Selskar Gunn was followed up in true reportorial style, and though he tried to escape by running off to New York, he couldn't dodge the secretary, and wrote the following interesting letter on the train:

Some of us poor fellows who entered with one class and graduated with another are in a terrible fix. We ought to be given a definite chance to decide which class we are going to belong to, or to be allowed to be neutral. You insist that I am a 1905 man, while I, myself, call myself 1904. Just think what it means to have to attend class reunions and dinners and to pay class dues to two classes. I shall be afraid to meet Stevens, the 1904 class secretary, after he sees this in print. You will have to defend me from his onslaughts and acknowledge that it was your consistent persisting that drove me to answer your appeals for this short account of my doings of late years.

Metinks that 1905 showed athletic prowess in the years gone by and perhaps your muscles are still large and strong. My feelings are to be described by the expression “I love, I love, I love my 1905, but oh you 1904.”

My friend, Ike Litchfield, has treated me royally, for he has given me notices from time to time in “Tech Men in the Public Eye” and elsewhere. The Public Eye must be watering with all these Tech men in it. Great is friendship!

If you want details of how I earn my bread and butter, I should respectfully refer you to the Boston and Massachusetts papers!! Of course you will have to keep your eyes peeled for Seltzer Dunn, for the reportorial staffs seem to have huge difficulty in getting either of my names right. Not my fault either, as my father and mother must take the blame. You will note that old age makes me facetious,—also gray haired, I have three silvery hairs.

If I lived in Shanghai or Brazil, it would seem perfectly *au naturel* to recount my wonderful adventures, experiences, what I thought of the natives, etc., but living in Boston within a stone's throw of the 'Stute, it seems futile and feeble, besides it would be dangerous to say what I thought of the natives. However, that great institution the W. P. B. is at your feet and if you send this in to the REVIEW, the responsibility is yours.

My work is that of a life saver, but instead of throwing out the life line, I do my work by more modern methods. When I came back to the Institute to teach in 1910, I had a hard job cut out, as I had to attempt to fill C.-E. A. Winslow's shoes, and I fear I must have rattled around in them a good deal. I have certainly enjoyed my teaching and with the growth of our department there have been increased opportunities. Working under my chief, Professor Sedgwick, is an inspiration to any man, besides being an unusual privilege.

I spent the summer of 1911 in Washington, D. C., where I served as assistant secretary general of the XV International Congress on Hygiene and Demography. It was a great experience, as here I met many of the leading men in sanitation, and it gave me a splendid introduction to them. Early in 1912 I was appointed managing editor of the *American Journal of Public Health*, and secretary of the American Public Health Association. I was elevated to position of editor of the *Journal* in 1914, when the editor, Dr. Livingston Farrand, resigned and went to Colorado to become president of the State University there. This publication has shown a steady growth, and is on the road to self-support. (Members of the class can show their class spirit by subscribing, \$3.00 per.)

In April, 1914, Governor Walsh appointed me a member of the State Board of Labor and Industries, and as the Commissioner of Labor, Robert N. Turner, resigned, I was appointed acting commissioner of labor and served for several months. My short experience on this board was highly interesting and valuable. My term on the board would have expired in 1916, but I resigned to become director of the Division of Hygiene of the Massachusetts State Department of Health. This position I am still holding and it is fascinating work. It might be called a division of health education. While great progress has been made in public health work throughout this country, still the greatest part of all remains to be done. Health legislation and administration has limited benefits. If we are going to try and prevent the gross waste of human life, we have got to teach people to become efficient "human engineers." Everyone has got one engine to look after, and that's their own human engine. Many know more about running an automobile engine than they do about their own "works." I know many men who have a fit if they think their carburetor is supplying the engine with "too rich a mixture," but Good Lord! they stuff their own engines with an excess of food (and drink) without a thought.

My field of activity ranges from prenatal work to diseases of adult life, such as cancer, hardening of the arteries, etc. Educating people in health matters is a slow job, but it is essential if we are going to get results, destroy much suffering, ameliorate more, prevent premature death, increase happiness and make it more possible for us all to be of greater service to ourselves and to our fellow sojourners in this interesting world. Space forbids any discussion of the details of this work.

When I was a student, there was a tendency to look down on Course VII men as mere "bugologists." I can assure you that modern health work is a man's work, it becomes more than a mere occupation, and has to some of us the appearance of a religion.

My pencil has lost its sharpness and we are getting into New York City, so I must quit.

If you want more of this, I invite you to attend one of my "canned" health lectures. I have twelve varieties to offer, all illustrated with lantern slides and some with movies. Admission free, and don't shoot the lecturer. Remember he is doing his best and no man can do more. Life is surely worth living.

If you have not already filled out the information blank for our Ten-Year Book, please remember that it will help the committee

greatly to get these blanks back promptly. The secretary can say for the committee that the great amount of detail work in getting out a book of this kind is no cinch. The least each man can do is to get his own blank back promptly, and so save the committee and himself the trouble of a long "Follow-up" and enable us to get out the book in time for the big reunion.

By the way, you have an imperative engagement in Boston from June 8 to 14. Make a New Year's resolution right now to be here.

1906.

C. F. W. WETTERER, *Sec.*, 147 Milk Street, Boston, Mass.

JAMES W. KIDDER, *Asst. Sec.*, 50 Oliver Street, Boston, Mass.

Every 1906 man should plan to be in Boston next June. As the largest class that ever celebrated ten years out of M. I. T., we ought to have a big delegation at every event of the three days' "doings."

To begin to boom things for '06, we have selected about twenty representatives divided among the various courses, each representative to keep in touch with a part or all of the men in his course according to its size. This arrangement was preferred to a strictly geographical organization, as men in the same course are better acquainted and are also more apt to have a common interest on account of following similar lines of work. This organization will be permanent and after having proved its worth in connection with the coming reunion it should act as a news gatherer for the REVIEW, and otherwise promote 1906 affairs. If you have not heard from any one in your course by this time drop a line to the secretary, who will be overjoyed at receiving it and who will inform you with whom you should get in touch.

A Boston committee of '06 men has been at work since December, preparing for the coming reunion. This committee consists of Prof. "Jack" Norton, V, chairman, Ralph Clark, VI, Charlie Kasson, VI, and the secretary and assistant secretary. Any and all ideas which can be used by this committee in connection with the celebration will be gladly received by the secretary. Whether we, on account of our tenth year anniversary, should have a special celebration in addition to the events arranged by the Reunion Committee, is a question which has not been definitely settled. What do you think about it? Suggestions as to hat bands, songs, cheers, etc., are in order.

Our greatest opportunity to demonstrate our ability as a class will be in connection with the stunt at Nantasket. Every man in the class should take it upon himself to be thinking of this and submit suggestions. We want to decide definitely on the stunt as soon as possible, by the first of March at the latest, in order that we may file our intentions with the Reunion Committee. The stunt will occupy from three to five minutes, should include

all the members of the class, if possible, and something symbolic of Institute history is to be preferred. Let's get together and pull off "some" stunt.

As the detail program has or will be given out by the Alumni Association, it is almost superfluous for the secretary to note that it is going to be the "greatest ever," and, as already stated, every '06 man ought to be in Boston to the 1915 reunion.

The Galveston (Texas) *News* of September 6 contains an article with regard to an inspection of that city, as to sanitary conditions existing after the August storm, made by Charles Saville (Course XI), who is director of sanitation for the city of Dallas. The article gives the following résumé of Saville's work since leaving the Institute:

Mr. Saville is a graduate of the Massachusetts School of Technology at Boston. He spent six years with the State Department of Health of Massachusetts, after which he was abroad about two years in England and Germany, for the purpose of consulting on various sanitary problems there. He was later a consulting engineer on municipal sanitation and water supply problems in New York City, being engaged in this capacity by a number of the larger cities of the United States.

Since his appointment as director of sanitation at Dallas, he has consulted with engineers of Waco, Fort Worth, Austin, Tyler and other Texas cities with regard to their sanitary problems, and says that he has never been more interested in any work than that he is now doing at Dallas.

He was a member of the United States relief expedition sent up the Ohio River directly after the disastrous floods in that section about two years ago, where he gained a great deal of experience connected with the handling of sanitary problems created by floods and storms.

Charles F. Willis (Course III), who is professor of mining engineering at the University of Arizona, prepared four articles for a special edition of the *Arizona Daily Star*. One of these gave a history of the university and described the organization and work of the various departments. The other three articles had to do with mining in Arizona, this being the major industry of the state.—For the past three years H. E. Young (Course VI) has been sales manager of the Minneapolis General Electric Company. A recent number of the *Electrical Review* contained an article with regard to Young and his work. The following extract from this article is of interest:

Mr. Young was born at Bristol, Me., and grew up in the Middle West, attending preparatory school at Coburn Institute, Waterville, Me., and Lincoln Academy, Newcastle, Me. He graduated from Massachusetts Institute of Technology in 1906, in the course of electrical engineering. Mr. Young was employed for about a year and a half by the American Telephone and Telegraph Company, spending most of the time traveling largely in the southern states, including the South Atlantic, Florida and Gulf states, laying out underground construction and future development work. While in the employ of this company, he took the United States Civil Service examination and received an appointment in the department of Coast Geodetic Survey, going to Washington, D. C., and shortly after to Manila, Philippine Islands, in connection with the work of this department. In the latter part of 1908 he resigned his position in this department to accept the position of city electrician in Manila, the department of which he had charge in this connection, supervising the construction and maintenance and operation of the fire and police

alarm systems, the street lighting of the city, and had charge of the inspection of electrical installations and outside construction work, tested all electric meters installed, etc.

Mr. Young was later appointed by the government to make an investigation regarding lighting rates, street car service, etc., and this investigation took him through Europe and America, thereby completing a trip around the world. On returning to Manila he was appointed to make another investigation in connection with a gas franchise which was to be given to a concern in Bremen, Germany. He again went to Europe and America, completing a second trip around the world. In connection with this work he wrote a gas ordinance, with regulations regarding the sale and supply of gas, testing of meters, testing of gas, etc., and compiled a list of apparatus for installing a laboratory, and collected the necessary data and information for the supervision of this industry by the government.

In 1912 he resigned from government service to take a position with the Toronto Hydro-Electric System, where he had charge of the sales force, resigning the following year to take a position with H. M. Byllesby & Company, with whom he is connected at the present time.

1907.

BRYANT NICHOLS, *Sec.*, 10 Grand View Road, Chelsea, Mass.
HAROLD S. WONSON, *Asst. Sec.*, Waban, Mass.

I. *A Word from the Secretaries*

Three-in-one celebration, June 12, 13, and 14, 1916: Regular five-year reunion of Tech alumni, fiftieth anniversary of the opening of the Institute, dedication of the new buildings. *Also* a big celebration for our class, taking the place of the tenth reunion which would come next year, will occur on Friday, Saturday, and Sunday preceding the dates named, consequently the time for '07 men to come to Boston. Read about the plans elsewhere in this number of the REVIEW. Plan your vacation so as to be here. Griffin of Utica, N. Y., has already written to learn these dates so that he will be able to come sure. That's the spirit! Make it contagious! Catch it!

An informal gathering of some of the '07 men in Boston and vicinity was held at the Boston City Club on December 4. Those present were: Frank MacGregor, Milton MacGregor, P. R. Nichols, Harold Wonson, Lawrie Allen, E. E. Turkington, Oscar Starkweather, Hugh Pastoriza, Harry Moody, Allen Pope, L. L. Allen, Macomber, Herbert Spear, Hosmer, Bryant Nichols, and, as a guest, I. W. Litchfield, '85. After a splendid dinner, a short discussion regarding the coming June events took place, and as stated above, it was agreed that it would be advisable to have our big tenth reunion which would come in 1917 advanced a year, and held in connection with the celebration of 1916. Macomber will appoint a committee soon to have charge of all matters pertaining to the combined events. If anyone has any suggestions as to stunts for the Nantasket day on June 13, please write at once to the secretary. In addition to the local committee at Boston, the secretary has asked the following men to serve as class boosters in the various centers named: New York City, George W. Otis; Chicago,

John M. Frank; Washington, D. C., P. V. Dodge; Baltimore, Grandville R. Jones; Cincinnati, S. R. Miller. Those present at the Boston dinner on December 4 were splendidly entertained by Mr. Herbert A. Clark, a professional entertainer, and by I. W. Litchfield, who told of the plans for next June.

II. General Items of Interest

Harold S. Wonson, formerly of East Gloucester, now of Newton, has accepted a commission on the staff of the Eighth regiment as a battalion quartermaster and commissary with the rank of second lieutenant. The *Gloucester Times* comments on the appointment as follows:

Lieutenant Wonson was formerly first sergeant of Company G of this city and acted in that capacity during the Lawrence strike of 1912. He is a graduate of Massachusetts Institute of Technology where he specialized in military service. He has many friends in the regiment who will be glad to see him return with increased rank.

He takes the position made vacant by the resignation of Lieutenant Herman L. Dillingham.

E. L. Chaffee has built a home for himself, and his address is 20 Highland road, Belmont, Mass.—Ralph Crosby writes from Kenmore, N. Y.:

This is a village of two thousand inhabitants, just over the city line of Buffalo. My wife and the three children and I moved here in October. I am at work for the Curtiss Aeroplane Company in Buffalo.

L. R. Davis is with "Stud" Leavell, that is, care Kirk & Leavell, Newhouse Building, Salt Lake City, Utah.—Charles A. ("Chick") Eaton, who was appointed to the army from civil life on September 25, 1909, has resigned. His resignation took effect November 15, 1915.—Hudson B. Hastings has returned to Portland, Oregon, and is once more teaching in Reed College.—W. I. Keeler's address is now 1207 President street, Brooklyn, N. Y.—H. J. C. MacDonald is still with the Granby Consolidated Mining, Smelting, and Power Company, Ltd., but his address is at the head office, 812 Birks Building, Vancouver, B. C.—Milton MacGregor, who is teacher of mathematics at Mechanic Arts High School, Boston, presented a paper at the annual meeting of the Association of Mathematical Teachers in New England on December 4, 1915, on "The Teaching of Quadratic Equations." Mac became the father of a second child, Milton Emery, Jr., on October 22, 1915.—Kenneth Moller's address is 166 Waterman street, Providence, R. I.—E. A. Miner is now signal constructor for the Boston Elevated Railway Co.—Fred W. Morrill has left Boston, and is with the Ferro Concrete Construction Company, Cincinnati, Ohio.—John S. Nicholl is living at 491 Main street, Cambridge, Mass.—George R. Norton, captain, U. S. A., is at Fort Terry, New London, Conn.—Hugh Pastoriza is now with Perry, Coffin & Burr, 60 State street, Boston, brokers.—A clipping in October, 1915, states that Sergt. George Sidney Sedgwick Playfair, who was with

our class for one year, was wounded in the recent British drive in northern France, and is now in a military hospital in France.—H. D. Reed is assistant traffic engineer in charge of circuits and routings with the New England Telephone & Telegraph Company. His address is 41 Egremont road, Boulevard Station, Boston.—Edward H. Sargent, associate member A. S. C. E., was appointed in October assistant engineer of water power, storage and drainage for the State Conservation Commission at a salary of \$3,000 per annum. He was selected from 69 competitors who took the civil service examination for the position.—John Tetlow is at 916 Beacon street, Boston, Mass.—The former employers of A. K. Tylee advise us that he is with the Aviation Corps, Canadian Contingent, but his exact location is not known.—J. E. Tresnon left November 15 for England, according to word received from his recent Everett, Mass., address.—We are in receipt of news from Albert E. Greene, '07, who writes that he is superintendent of the Olympic Steel Works, which is a small steel foundry business in Seattle, Wash. Greene states that they are operating a small one and one-half ton furnace, melting steel scrap by the processes which he has developed during recent years, and considering the business conditions and the starting of a new business they are getting along very nicely.

1908.

RUDOLPH B. WEILER, *Sec.*, care The Sharples Separator Co.,
West Chester, Pa.

CHARLES W. WHITMORE, *Asst. Sec.*, care of H. C. Castle, Inc.,
161 Devonshire Street, Boston, Mass.

REUNION

June 12, 13, 14. Fix your vacation for that time, unless you have for your slogan "A poor excuse is better than none." Complete information, plans, etc., will be in your hands very soon. Class representatives for this class in the given localities are as follows: New York, O. S. Lyon, Metropolitan Bldg.; Pittsburgh, H. A. Rapelye, 2123 Oliver Bldg.; Philadelphia, G. C. Lees, 826 S. Alden street, Philadelphia, Pa.; Chicago, Donald Bowman, 72 West Adams street; Providence, Clarence L. Hussey, Fruit Hill.

I. On the part of the Secretaries

The regular bi-monthly class dinner was held at the Boston City Club Tuesday evening, November 9, and besides mentioning the usual defeat of the Single Men's Bowling Team, we had with us Mr. Oscar Iasigi who has recently returned from the front in France where he was an ambulance driver for the American Hospital. Oscar's modesty prevented his telling as much as we would have liked to have heard, but his story, however, was very interesting. Doc Leslie then told us how it seems to be in a real *bonafide* army

as he spent a month at the summer camp at Plattsburg.—William C. Folsom, Course XI, is now employed as chief of the division of sanitation with the Cincinnati department of health. Following the appointment of the present efficient and independent health board, the work of the department was placed in charge of several chiefs of divisions with instructions to increase the efficiency. Folsom was called from Washington, D. C., to take charge of this work in the division of sanitation.

He completely reorganized the inspection force, reducing the number from 26 to 11 but retaining the young and energetic men, installed and perfected a card system for recording the division records, introduced the use of the typewriter, rubber stamps, duplicating carbon copies and routine method for increasing the efficiency of the office clerk, successfully enacted and had passed numerous laws and ordinances which have greatly increased the effectiveness of the department, successfully devised means for vacating insanitary buildings and for abating nuisances and assessing the cost on the tax duplicate, started an educational cause for the benefit of the department inspectors, investigated tenement conditions and recommended improvements, inaugurated efficient inspection of restaurants, hotels, lodging houses, theatres, laundries, saloons, groceries, barbershops and bakeshops, created a system of records for the control of all private water supplies, required the installation of apparatus to eliminate objectionable odors created in various trades, and, through coöperation with the sewage department, has abated many sewage nuisances.

The local department of health while small and hampered because of lack of funds has been converted by Folsom and others into one of the most progressive and efficient departments in the country.

The death is reported of Francis C. Goode, but we are not in receipt of any details.

II. *Class of 1936*

Mr. and Mrs. A. H. Thompson announce the birth of a 7½-pound boy on July 25.—Mr. and Mrs. Harry Webb announce the arrival of Harry G. Webb, October 12.—Mr. and Mrs. John Theodore Tobin announce the arrival of Mary Theresa on November 21.

III. *Matrimonial*

G. A. Joslin was married November 9 at Los Angeles to Miss Jessie Eve Heber. At home after December 1st at Ray, Ariz.

IV. *New Addresses*

C. W. Bailey, 402 Mary St., Utica, N. Y.—W. F. Grimes, Jr., Box 275, Balboa Heights, Canal Zone, Panama.—John W. Bicknell, Medan, Sumatra.—A. W. Heath, 23 Central St., Boston.

1909.

CARL W. GRAM, *Sec.*, with Walter Baker & Co., Ltd., Milton, Mass.

Grand Technology Alumni Reunion, Monday, Tuesday, and Wednesday, June 12, 13, 14, 1916! Postponed Five-Year Anniversary of 1909!

A very elaborate program is being arranged by the committee in charge of the big reunion. Even if it were not for our own postponed reunion, and the dedication of the new Institute buildings in Cambridge the like of which cannot be found anywhere else on this planet, there will be attractions sufficient to repay you for a trip back to Ye Olde Towne of Boston. Notices will be sent out later, but the main thing to do now is to reserve the above dates with a few more on each side.

Announcement was received of the marriage of Miss Jessie Eve Heber and Mr. Garnett Alfred Joslin on Tuesday the ninth of November, 1915, Los Angeles, California. Good work, Joss! Congratulations! They are now at home in Ray, Arizona.—Here's another. From the Boston papers of November 10, we found that Miss Elsie Vose of Brookline was married on November 9th to Frank Sherman Lovewell of Chicago. Harold Sharp was best man and Dick Ayres was one of the ushers. Mr. and Mrs. Lovewell will reside at 100 Charlesfield street, Providence. Best wishes, Doc!—From the *Electrical World* we have the following clipping:

L. C. Eddy, who held the position of director of the electrical department of the Shawinigan Technical Institute, Shawinigan Falls, Quebec, Canada, last year, has been engaged as assistant instructor in the electrical department at the Norwich University, Northfield, Vt. Mr. Eddy is a graduate of Brown University and took a general course in engineering at the Massachusetts Institute of Technology.

M. J. Daley is now at 439 Washington street, Brighton, Mass.—F. H. Soderstrom finished his work in connection with the construction of the Inspiration mill at Miami, Arizona, and is now in the engineering department with the Old Dominion Copper Mining & Smelting Company at Globe, Arizona. His address is Box 1321, Globe, Arizona.—Robert M. Keeney resigned his position at the Baker Mines Company, Cornucopia, Oregon, to accept a position with the Magnesium Manufacturing Corporation at Rumford, Maine; later located with the Standard Chemical Company, Canonsburg, Pa.—H. J. Stiebel's address is now 1897 Beacon street, Brookline, Mass.—Morse W. Rew, Course I, is engaged in rapid transit work in Cincinnati. The Miami and Erie Canal from Toledo to the Ohio River, at Cincinnati, runs through the city of Cincinnati from its north corporation line to the river. Except for about half a mile of this, which has been sewerred, the whole length is an open canal, insanitary, unsightly and practically unused.

It has long been the wish of the people of Cincinnati to eliminate

this eyesore and make use of the right-a-way for some purpose beneficial to the public. Numerous suggestions have been made for the use of the right-a-way, the more noteworthy of these being an entrance for railroad lines, an entrance for interurbans and rapid transit line, or a boulevard.

At the present time Cincinnati is greatly handicapped by the fact that many of the interurbans coming to the city have their termini in the suburban districts and all freight and passenger traffic must reach the heart of the city by other means. This is due to the fact that some of the lines use a 5'-2½" gauge, while others have the standard 4'-8½" gauge.

The topography of the country is of so rough a nature that the population per square mile is much less than that of the average city (about seventy square miles for a population of four hundred thousand people) requiring much longer average street car rides than is the usual case. The fact that the suburbs can be reached only by certain arteries of travel, *i. e.*, through valleys, along which reasonable grades to the hills may be obtained, causes congestion of street car traffic.

As a result of these conditions there is a pressing need for a rapid transit system which will provide quick and easy access from the suburbs to the business district, together with a feasible entrance for interurbans to a common freight and passenger terminal in the heart of the city.

In the summer of 1913, Mr. F. B. Edwards of Boston was appointed division engineer and Morse Rew was appointed in charge of designs and estimates. An engineering force was organized and careful surveys and designs for a rapid transit system were made, together with estimates of cost of the same.

The proposed scheme is a belt railway through the business district and following the canal on the west to the north side of the city. On the east the proposed line follows the river bluff and certain ravines, which afford an economical means of construction, to the northeastern section of the city. The belt is completed by a high speed, surface, crosstown line connecting the termini of the rapid transit line. It is planned to replace this surface line at some future date with a rapid transit line thus completing the rapid transit loop. Freight and passenger terminals for interurbans, of ample capacity to provide for the increase in business for many years in the future, has been provided in connection with the system.

A rapid transit commission appointed by the mayor in November, 1915, is now considering the plan and will probably put the matter in the form of a bond issue before the people for their approval in April, 1916.

Many important steps are now being proposed which will lead to a larger and better development of the city and rapid transit system and interurban entrance is among the most important of these.

Ike Litchfield has requested that the April number of the REVIEW be made specially interesting by reminiscences of Tech life. As this is something that cannot be "doped out" by the secretary, will all '09 men please send in any anecdotes they can recall. No matter how trivial, send it in, and let "Ike" be the censor.

1911.

ORVILLE B. DENISON, *Sec.*, Hotel Standish, Worcester, Mass.
HERBERT FRYER, *Asst. Sec.*, 1095 Fellsway, Malden, Mass.

Greetings, classmates! Your humble scribe is once more able to skip lightly over the keyboard of a typewriter in a most enjoyable effort to chronicle the current news of the gallant band of 1911 pals. Apparently the most unfortunate automobile accident of October 16, in which the writer sustained a double fracture at the base of the skull, will leave no lasting effect upon him, according to the physicians in charge of his case. Hence: "To Work!"—As usual the first and most important news to disseminate (that's a good word) is a recapitulation (another good word) of the 1911 doings in the matrimonial and near-matrimonial leagues. From Manchester, N. H., we learn of the wedding of G. Arthur Brown and Miss Hazel P. Hammond at Dover in the Granite State on September 17. Mr. and Mrs. Brown now occupy a cozy home in the Gresley Apartments in Manchester. Accept the hearty congratulations of your classmates, G. Arthur.—Way out in French Lick, Indiana (wherever that is), our classmate Harry H. Catching was married on September 25 to Miss Lillian Jean Eastridge. Har, my boy, the best of luck to you and your bride!—Jumping geographically to the middle South, we learn that on October 5 (the very day on which "yours truly" read of his engagement in a Worcester paper) Ralph T. Hanson, '11, was married to Miss Eleanor Middleton Rutledge at Calvary Church, Fletcher, North Carolina. Hanson is a graduate of the Institute in the course of naval architecture, and is at present in the corps of naval constructors of the U. S. Navy. May your voyage on life's matrimonial sea be most enjoyable, classmate!—Let's come up the Atlantic seaboard now to New York and then northward upstate until Newburgh is reached. In this city on October 15 Edwin F. Stimpson, an '11-er, was married to Miss Geneva Elsie Alexander. Mr. and Mrs. Stimpson are now at home at 2503 Jefferson street, Wilmington, Del. Accept your share of the class's congratulations, Ed.—The following clipping from the Lynn (Mass.) *Item* of November 5 is of interest:

Mr. and Mrs. Edgar G. Smith of Woodlawn street have made formal announcement to their Lynn friends of the marriage, in Manchester, N. H., on October 16, of their son, Harold A. Smith, to Mildred Weeks Elliott. Mr. Smith is a Tech man, class of 1911. He followed his profession of mechanical engineering in Manchester for three years. The wedding took place just prior to his departure for Three

Rivers, where he has accepted the place of machine superintendent in the Palmer Mills. Mr. and Mrs. Smith have taken a house in Three Rivers and will make their home there.

Congratulations and best wishes, H. A.—Here's another man who, true to predictions, has "went and done it." On November 4 in Buffalo, N. Y., Kester Barr and Miss Katharine Louise Noble were married. Good work, Kes, old boy and best wishes from your classmates.—Now advancing somewhat in regular chronological order, here's some more news. Mr. and Mrs. William J. Pead, Jr., of Lowell, announce the birth of William J. Pead, 3d, on November 25 at Lowell—weight, $9\frac{1}{2}$ pounds. Dat a' boy, Bill!

As an aftermath of the recent sending out of preliminary announcements of the coming grand congress of M. I. T. alumni, the secretary has had a number of unclaimed letters returned to him. Therefore, if any classmate or in fact any alumnus reading these notes happens to know the present whereabouts of any of the following men, the secretary will gladly welcome receipt of such information: E. S. Anderson, W. C. Davis, Jr., J. S. Dean, H. F. Dolliver, J. J. A. Gannon, Jacob Goldberg, Max Kushlan, A. L. Myers, G. W. Rapelli, E. H. Ridstrom, A. H. Rooney, E. O. Scriven, W. Y. Stamper, Jr., R. R. Stanley, R. D. VanAlstine, H. J. Wood.—At the present writing it appears that the recent attempt of the secretary to ascertain the extent of work accomplished by classmates for the public welfare of the state or community has been practically devoid of results. However, should the future bring in replies to the question asked, such news will be recorded in subsequent editions of these class notes.—Early in November the secretary was in receipt of the following interesting letter from Pedro de Souza Leão, a classmate from Brazil:

Until last September I worked in dispatching imported goods at the Custom House, Manaus, the beautiful tropical town, capital of Amazonas State. Presently I am in Porto Velho, Rio Madeira, in the office of the Madeira-Mamore Railroad run by Englishmen and Americans, and with offices in London, Paris, New York, Rio de Janeiro, Para, Manaus and Porto Velho, the latter place being the terminus of the road. Its chief business is the transportation of rubber from the interior of Brazil and Bolivia. From here the rubber is carried in steamers down the Madeira river to be exported from Manaus and Paro.

Dear classmate, I got married a year ago this month (Nov.) to a genuine Amazonian girl and am the happiest man living. I live in the heart of the tropics and therefore would be awfully glad to receive news and papers from all of you. If any of the boys are interested in postage stamps I will gladly exchange some good South American specimens for old American ones.

Please remember me to all our old comrades.

—From the lower extremity of our own country, bordering on the Gulf of Mexico, comes a letter from George Forristall, who is firmly convinced that Galveston, Texas, is the real goods as a city. George is in charge of the advertising division of the *Galveston Tribune* and opines:

Call me Father now, old man. Yep, the young lady, Miss Barbara Forristall, was born on the 18th of September and was a nine-pounder. She's still growing and the madam is fine, thanks.

Am just rounding out my second year as advertising manager of the *Galveston Tribune* and have been having wonderful success down here. I was married August 26, 1914, and since then we have been having experiences: two burglars, a fire, a hurricane and now an infant. Some year, believe me. The storm here wasn't quite as bad as those outside of town tried to make out, but it was enough, thank you. I am still sticking to the town though, because it's a grand little place and offers as wonderful an opportunity as any man could want.

I'm sending you a little folder I got up right after the storm here and sent out. It gives a rather good idea of the most thickly settled part of the city and I think that it may interest you. So here's good wishes to you and all the others whom I never see any more. Hope that I can join the army of 1911 in the early part of June, 1916. Maybe I can persuade the boss to let me off for enough time to imbibe once more at Charlie's or Jake's.

Stay with 'em, George, old hoss!—Roger Loud, Course VI, has left his position as manager of the Vinalhaven, Maine, Electric Light Company, and has joined the forces of the Edison Illuminating Company of Boston, being located in Weymouth.—Norman De Forest, who is in the Hamill-De Forest Company in New York City, writes that he regrets exceedingly that he is not a public servant. He says he is simply trying to hold body, soul and family together, and making out fairly well at that.—Phil Caldwell has branched out into new lines and the following paragraph of his reveals the "plot:"

I have left McElwain Company and am starting in for myself here in Merrimack, N. H., with a partner under the name of Caldwell-Jones Company. We bought seven acres on the B. & M. main tracks and have our plant half-built.

More power to you, Philip.—D. P. Gaillard is at present located in the Boston office of D. C. and Wm. E. Jackson, engineers, and will be around this territory for some little time, probably eventually returning to the Chicago office.—Bill Salisbury has moved from Chicago to Minneapolis, Minn., where he has the agency for the Rockwood Sprinkler Company. In a recent letter he sends warmest regards to all classmates and says married life is *the* life.—Here's what our old friend D. P. Allen, Course II, has to say in a recent letter from Des Moines, Ia.:

You may be a little surprised at getting this letter from Des Moines instead of Philadelphia. Last June, just as we had got our house nicely furnished and arranged, the company took it into its head that I would be less of nuisance out West than in Philadelphia and they kicked me out here on about a ten-day notice. Nominally I'm an "insulting" engineer, or something that sounds like that, but thus far my work has been mainly that of "Works clerk" with a bunch of coal, coke and gas testing. It's the best work I've had so far and just the sort I like.

Just remember me to all the 1911 bunch you happen to meet and if such a thing is possible, it's Boston in June, 1916, for me.

—Well, boys, elsewhere in this issue you will find all the "dope" on the big reunion next June. Make your plans to attend and you'll never regret it. Remember, it's the fifth birthday of 1911.

Address Changes

D. P. Allen, Regent Apartments, 903 West 7th St., Des Moines, Ia.—G. Arthur Brown, Gresley Apartments, 673 Chestnut St., Manchester, N. H.—P. L. Caldwell, care of Caldwell-Jones Co., Merrimack, N. H.—A. T. Cushing, 625 Pennsylvania Station, Pittsburgh, Pa.—Norman De Forest, care of Hamill-De Forest Co., 200 Fifth Ave., New York City.—George B. Forristall, care of *Galveston Tribune*, Galveston, Tex.—D. P. Gaillard, 248 Boylston St., Boston, Mass. (Temporarily).—Pedro de Souza Leao, Madeira-Mamore Ry. Co., Porto Velho, Rio Madeira, Amazonas, Brazil, S. A.—Roger P. Loud, 87 Commercial St., Weymouth, Mass.—W. C. Salisbury, 4656 Colfax Ave. S., Minneapolis, Minn.—Harold A. Smith, care of Palmer Mills, Three Rivers, Mass.—Edwin F. Stimpson, 2503 Jefferson St., Wilmington, Del.

1912.

RANDALL CREMER, *Sec.*, care Snare & Triest Company, Cruz Grande, Chile, So. America.

J. E. WHITTLESEY, *Asst. Sec.*, 10 Regent Street, W. Newton, Mass.

Every one is now familiar with the dates and plans of the great event to come off in June in Cambridge. All the members of 1912 are urged to show their interest by suggestions and plans for the part their class will take in helping to make a success of the whole. Send in ideas to your secretary that the class may be there in full force with zest and pride in their stunts. A glimpse of the new buildings is enough to waken anyone's enthusiasm to the highest pitch. Look out for the dates of June 12, 13 and 14.

A letter from Kebbon gives us the information that Arthur Campbell is in Shangsha, China. He is working for the Yale Medical Mission in the capacity of assistant engineer (he went from Tech to Yale), and is building a new and very large hospital building in that city. He has also taken unto himself a wife whom he met in that remote part of the world. We understand that his bride, who was Madame Sacabonne, the widow of a French solicitor, is a native of Versailles in France.—Arch Eicher is finishing up a large engineering job in Cleveland, a huge concrete filtration plant for the city. By the way, we have noted that Arch figured as best man at the wedding of John Leanearts who was married in October last. The Boston *Herald* of October 6 prints an account of the ceremony as follows:

Marion S. Cole, daughter of Mr. and Mrs. Arthur L. Cole, was married last evening at the First Congregational Church, Waltham, to John H. Leanearts, the Rev. Frederick H. Page officiating. Miss Leora Proctor of St. Petersburg, Fla., was maid of honor, and the best man was Archibald Eichler of Cleveland, a classmate of the bridegroom's in Tech '12. The ushers were H. Davis, U. of P. '12; Stanley F. Marr of Waterville, Me., Trinity '13; Reginald Thomas of Weston, and Ross Douglass and W. B. Hopkins of Brookline.

After the wedding ceremony a reception was held at the home of the bride's parents, 85 Brown street. Mr. and Mrs. Leanearts will reside at 69 Lyman street, Waltham, after New Year's.

"Noly" Stucklen has recently gone into the engineering business as agent for a firm in Boston, we hear, but we have not had any verification of this fact from Stucklen himself.—We also have heard of the marriage announcement of Donald Bent but no particulars have reached the secretary's desk.—News has also reached us of the marriage of Doc Wyman, Course II.

1913.

F. D. MURDOCK, *Sec.*, University Club, Hartford, Conn.

A. W. KENNEY, *Assoc. Sec.*, M. I. T., Boston, Mass.

If you have never had a proud moment in your life, or if you want to feel just one more, this first paragraph is particularly for you. If you, as a Tech man, do not feel a mighty thrill when the hush comes at the opening of the dedicatory exercises in the great court of the new Technology on Wednesday, June 14, 1916, you will be petrified or absent. Just turn back a few pages and read the preliminary plans for the three days' celebration in June, and decide if you can afford to be absent. The whole affair promises absolutely to be the greatest thing of its kind that will take place in our generation. No planning, pains, or expense are to be spared. Here is an opportunity to get your nose off the grindstone and measure up with other '13 men, and you will go away either encouraged or inspired, and at any rate wiser and more optimistic. For this is going to be an optimistic party all the way through. In 1909, at the reunion in connection with President Maclaurin's inauguration, the class of 1905 held the attendance record, with 119 men enrolled. 1913 has 225 men in New England, out of our 550, and we should get a nucleus of 150 men at the very least, from these six states. It is mighty certain that it would be your great regret to have to apologize and explain for years afterwards that for etc., ahem, etc., you didn't get there. Start planning right now: you get a vacation, ask now to have it in June. You will have an extra dollar now and then, salt it for your expenses on that trip to Boston. Be a live member of "*The Live Class!*"

A short, rather informal business meeting of the class was held following the dinner on December 4, and it was voted to have the secretary appoint a committee of five to have entire charge of our part in the reunion. These men have been named: George H. Clark, H. O. Glidden, W. R. Mattson, Chairman, H. D. Peck, and S. E. Rogers. They need no introduction, and you will hear a lot from them before June. Our most spectacular contribution to the general festivities will of course be the class stunt, which is to be pulled off with fifty others, at Nantasket. The stunt is limited to

a five-minute performance, and as far as possible it should convey, according to the wishes of the Alumni Reunion Committee, "some idea, either historical, or educational, referring to some well-known incident in the history of Technology or of the class." Our committee can be greatly aided by suggestions on this matter. You who live way off in Siwash may have just the dramatic genius or inspiration to give us the prize stunt. Do think about this, and if you have an idea send it to the secretary or to a member of our class committee.

The editor of the REVIEW has asked the secretaries to feature *reminiscences* in the April REVIEW. If some incident in your career or in the history of our class at the Institute is newsy, please write about it. There will be some interesting reminiscences among the other classes, and we don't want to lag behind.

Matrimony first has come to be our custom in these notes. It continues to be first in the minds of a fair proportion of our number. We thought Al Gibson was joking when he wrote about "his girl," but read this:

Colonel and Mrs. Hamilton Stone Wallace announce the marriage of their daughter Ruth Louise Winslow to Mr. Algernon Tuttle Gibson, on Wednesday evening, November 17, 1915, at 1945 Pacific avenue, San Francisco.

—Here's to you and yours, Al! You never can tell what is coming next.—See what "Si" Champlin, V, did according to his own words—

Married, October 30, to Miss Edna E. Shoemaker of Collingswood, N. J.—and have gained four pounds already yet.

The secretary ran across Si in New Haven, Conn., not long ago, and his appearance substantiated his testimony to the benefits of married life.—Joseph Oppenheim, V, was married on October 14, 1915, to Minnie T. Rosenberg, Everett High School, 1911.—In November, at a very pretty dinner party for the happy principals, the engagement of Miss Loretta Sweeney of Dorchester to "Bob" Murphy, VI, was announced. "Bob" is vice-president of an electric power company in Saint John, N. B. We have press notices of several parties which have been given in honor of the future Mrs. Murphy. Thirteen's best wishes to you all!—Joe Tennant, VI, writes:

Am the daddy of a fine boy—age 3 months—busy, happy.

Good boy, Joe!

On December 4, 1915, we held our annual reunion and dinner at the Crawford House, Boston, in spite of Harry Norman's, I, injunction that: "Rome fell on account of too much feasting and celebrating. Let us not, therefore, follow her example. What is the use?" Can't you just hear Harry saying: "Phet is de yoose?" Fifty men were able to sever home and other ties to help us celebrate, and to hear two good speakers. It must be remarked that the married men were the particular stars as far as attendance

went. Perhaps the absentees, and there were too many of them, were devoting the time to the finishing touches in order to enter that favored class before next year. In the first place we broke a record by sitting down on time. There was much to be occupied about, to tell, to ask, to reminisce. We were occasionally pleasantly interrupted by the festive sounds from the cabaret below. Certain of these sounds affected particularly, as one might imagine, our beloved Hap Peck. Hap finally demanded that the authoress be produced, so nothing would do but the secretary must leave his good meal and spirit the fair songbird to our midst. Much to the delight of the party the secretary was successful in his efforts, and we heard a request number (again Hap was responsible) and several popular airs to suit the occasion. The feast over, Toastmaster "Bunny" Brett, I, introduced Mr. A. B. Carhart, superintendent of the Crosby Steam Gage and Valve Company. Mr. Carhart is a Princeton man, and he gave us a very happy mixture of humor and sound advice. We will tell you his stories at the June reunion, for this is a Puritanical publication. Professor Miller was the second speaker, and he showed a large number of slides and told us many new and interesting details concerning the New Institute. In addition to leading the cheers, Bill Mattson, I, our representative on the Alumni Council, told us some of the plans for the big reunion, and after a short, rather informal business meeting the party broke up, the married men going directly home. We are sure of this last statement because on searching for the associate secretary the secretary found the bar deserted of thirteen men. It was a good time, though a mere rehearsal for the "reel" dinner which comes Monday evening, June 12, 1915 at the City Club, Boston. Please put that date down now.

Speaking of dinners, it is in place here to congratulate the men around Boston who, at their own initiative and expense, sent a letter to each man in the class, inviting him to attend the monthly informal dinners. That is an excellent example of class spirit; and we are proud of it.

The class appears to be settling down somewhat, judging from the falling off in the number of changes in business and address. Some news has drifted in. Al Gibson, III, whose name appears in the matrimonial news this month, has left the paper box business in San Francisco, and has gone to southern California, to go into business there.—Charlie Trull, VI, is in Lowell, for the Stone & Webster Company, doing electrical testing.—"Bob" Nichols, I, is back from Los Angeles, and is now an efficiency engineer, with Dunn and McCarthy, in Auburn, N. Y.—Right around Boston we have had some changes, that were almost overlooked in the shuffle. The "Bills," Mattson, I, and Brewster, II, are in new work since their names last appeared here. Mattson is back with the Massachusetts Highway Commission, and Brewster has a business position with the Plymouth Cordage Company, Plym-

outh.—Something leaked out at the dinner about our modest George Clark, II. Mr. Carhart complimented George's success in the perfection of the design of new steam device for the Crosby Steam Gage and Valve Company. George holds the title of consulting engineer for this latter concern.—"Pa" Ready, VI, confirmed his existence, in a post card from Cuba, which he calls "the land of the shirt waist and sometimes skirt."—An important message is at hand from "Mons" Gagnon, II, in which he wished it announced to the boys that he has quit swearing. Alas for poor, neglected, profanity, but really the next Course II pow wow will be awfully flat and spiritless, if "Mons" is to be taken seriously.—Dick Cross, VI, bobs up in Massena, N. Y., where he is working, still for the Aluminum Company.

Roger Freeman, VI, is reported to be in Thomaston, Conn., though Roger hasn't admitted it yet. He is working for the Turner Construction Company, a firm which specializes in concrete building construction.—Smythe-Martin, II, is a neighbor of Roger's, down in Waterbury, Conn., with the Williams Sealing Corporation.—Ralph L. Thomas, VI, has left the employ of the Stone and Webster Management Association to take a position as electrical engineer with the Pennsylvania Water and Power Company, Baltimore. This company supplies most of the electrical energy used in Baltimore, from the hydro-electric plant at Holtwood, formerly McCalls Ferry, Pa. The job looks good to Ralph.—William W. Stevens, II, is in Winona, Michigan, with the Winona Copper Company.—The last we knew of "Pete" Haynes, I, he was in Kansas, in the Portland cement business. Larry Hart states that he saw "Pete" in the New York subway in November. What is this, Peter, a little trip to the gay white way, on the quiet?—Larry states that he saw Jake Goff, I, in Pittsburgh in October. We are glad to hear of you, Jake, even though we have given up hope of hearing from you.—We had a real nice letter from "Steve" Braude, X, not long ago, in which Steve made considerable clamor for the latest REVIEW, and for a chance to pay class dues. This is a sure enough great exhibition of Tech and class spirit on Steve's part and we congratulate him.

The reply post cards from the dinner announcements contained several interesting excuses for not being present. One states that we were too near the war; Gene Macdonald's was that it was a long distance from New York and besides he wasn't very hungry that night. A. E. Hirst's, V, took the prize. He wrote:

"I haven't been my own boss since last June. Fifty miles is a long walk, and my wife's feet are tender."

We have a most interesting letter from Mayo Tolman, XI, which we print in full:

I am sorry I am so far away from home that I will be unable to join the boys at the Crawford House on the last Thursday of every month. I would give a good deal to be among the old 13'ers again.

Much has happened since you heard from me, either directly or indirectly. I can tell by the little item which came out in the TECHNOLOGY REVIEW more than a year and three quarters ago that you knew I married Miss Ruth Dunbar of Brookline who used to go to Tech. I take it, however, that you do not know that we have an eight months' old boy, who seems to be extremely husky and equally amiable. You will notice by the letterhead that I have been appointed to a very responsible position. Don't ask me why for I don't know. All I do know is that I have been up to my ears in work. I was appointed chief engineer to the West Virginia State Department of Health in July of this year, which is the month in which a new law creating a division of sanitary engineering went into effect. You can see, therefore, that I have had to organize an entirely new office and to plan the work of this division so that the most good may be accomplished. The state of West Virginia covers 24,000 square miles, which means of course that I have got to keep my eye on the water supplies, sewage disposal systems and general health tone in all its corners. I have had seven or eight rather serious outbreaks of typhoid fever which, fortunately, have not proved very hard to check. The fact that these outbreaks have been controlled before they became extremely serious has been noised about the state, with the result that I am continually having demands made on my time for public addresses and for examinations of water supplies, etc. The work is fascinating and the department is bound to grow very rapidly. The thing that appealed to me the most, when I accepted the position, was the salary, but now I have fallen in love with the state and like the work for the work's sake. West Virginia is, as you know, spoken of as "The Mountain State" and it certainly is an appropriate name. There is not a railroad in the state but what has ten or a dozen tunnels in its line. It is said that if West Virginia were ironed out flat it would cover all New York State, Massachusetts and Vermont. I am sorry to say I cannot prove it.

Mrs. Tolman studied bacteriology at the Harvard Medical School for two years after leaving Tech. This summer, while I was starting the new office, she went north and worked at the Harvard Medical School again. This training, combined with the knowledge of bacteriology gained at Tech and the University of Chicago, has made a splendid bacteriologist of her and a great help to me in my work. We have equipped ourselves with a good laboratory, including many of the most needed instruments and all of the best make. We have been carrying on a little research work together and hope, in the near future, to be able to bring forth some results which may be of value. Her time, however, is so much taken up with the baby and housework and mine with the office, that we get very little opportunity to work in the laboratory. I have also equipped myself with a fairly good machine shop and carpenter shop in which I make most of the crude instruments which I sometimes need, or think I need. You may be interested to learn a little more about what this position means. I have entire control over all water supplies, sewerage systems, refuse disposal systems, drainage, river control, typhoid epidemics, etc., in the state of West Virginia. The West Virginia Public Service Commission has issued a regulation requiring every public water utility in the state of West Virginia to own a bacteriological sample case of the design and make specified by me, and they are required to ship samples of water to the State Hygienic Laboratory at least once every month and as much more often as I may require. I have designed a new sample box, which I am very proud of, and which will, I think, prove very satisfactory and extremely useful. I have devoted considerable time to drawing up analyses blanks, sample information cards, and many other forms which will prove necessary in this department. I have had a great deal of traveling to do recently, as I have made up my mind to visit every one of the water supplies in the state of West Virginia, and make personal examinations in order that I may know exactly the situation which exists at any place. In the future I will be able to send out an assistant when any problem arises and know just exactly what the situation is at the place which he visits.

I have a splendid office in the state capitol. If I had had my choice of any room in the building I would certainly have taken the one assigned to me. It is a large room, about 19 x 22, with the ceiling 18 feet high. It is located on the northwest corner of the Capitol Building, so that I have four windows on two sides.

Out of the north windows I can look on to the mountains while the west windows face the governor's mansion. During the hot weather last August I think I can safely say my room was the most comfortable in the State House, and, of course, we have plenty of heat during the winter time, so being on the northwest corner is no drawback. Then again, the north windows supply excellent light for the draughtsman. Another beautiful thing about my position is that I can attend all the big engineering conventions, with expenses paid. I am going to attend the annual convention of the American Water Works Association in New York City from June 4 to June 9, 1916. The afternoon of the 9th will find me in Boston ready for the dedication of the new Tech buildings. It makes a great big lump come into my throat to feel that we are going to abandon forever buildings which mean more to our lives than any others. Of course the new buildings give me the greatest of joy, but still the dingy corridors, long flights of stairs and "Rogers Steps" have won a very warm place in my heart.

Hoping to see you and all good 13'ers in June of next year.

In answer to the plea of the secretaries for address changes, quite a number were received, and we have been careful to list all of these in the "address changes" below. The class has, like all organizations, a good many uncommunicative men, the only news of whom is to be found in their changes of address. The number in this category is so large that these address changes make a distinct addition to the news proper, and we commend them to your perusal.

Address Changes

Ralph T. Alger, Shelbyville, Ky.—A. Russell Atwater, care Lilly Varnish Co., Indianapolis, Ind.—R. C. Bergen, Metallurgical & Chemical Engineering, 239 West 39th St., New York City.—M. G. Berlin, M. D., 3 Esmond St., Dorchester, Mass.—Clarence I. Berry, 18 Roxford Rd., Cleveland, Ohio.—Kenneth B. Blake, 9 Harcourt St., Boston, Mass.—Rev. Walter P. Boardman (pastor of Buffalo Presbyterian Church), Box 304, Buffalo, N. D.—Lee Bowman, 93 Newbury St., Boston, Mass.—G. H. Buchanan, 534 Delaware Ave., Palmerton, Pa.—Charles L. Burdick, Droysenstr. 7, Charlottenburg, Berlin, Germany.—A. W. Carmichael, New York Navy Yard, Brooklyn, N. Y.—S. H. Champlin, 105 Seventh Ave., Haddon Heights, N. J.—Joseph H. Cohen, 316 Huntington Ave., Boston, Mass.—Angelo Corrubia, 1324 Central National Bank Bldg., St. Louis, Mo.—Richard B. Cross, care Aluminum Company of America, Massena, N. Y.—Howard S. Currier, 171 Florence Ave., Highland Park, Detroit, Mich.—Robert G. Daggett, 501 West 121st St., New York City.—F. W. Eaton, 44 Dover St., Worcester, Mass.—Raymond O. Elcock, care Giant Cement Co., Egypt, Pa.—H. P. Fessenden, 31 Willow St., Woonsocket, R. I.—C. W. Gotherman, 900 Sixteenth Ave., Altoona, Pa.—Heisler Harrington, care du Pont Powder Co., City Point, Va.—M. H. Harrington, 318 West 57th St., New York City.—Lawrence C. Hart, care H. W. Johns-Manville Co., Michigan Ave. and 18th St., Chicago, Ill.—J. M. Hastings, Jr., Semet-Solvay Co., Detroit, Mich.—Henry G. Hauck, 99 Meserole Ave., Brooklyn, N. Y.—John H. Hession, 328 Huron Ave., Cambridge, Mass.—C. R. Hill,

University Club, Denver, Col.—Alfred Katz, 21 Besse Place, Springfield, Mass.—John L. Kerr, 28 Mynderse St., Schenectady, N. Y.—John G. Lanning, care Ashcroft Mfg. Co., Bridgeport, Conn.—Russell E. Leonard, 15 Dey St., New York City.—Robert A. Leshner, 2940 Broadway, New York City.—Walter E. Lowell, 501 Mairo St., Amesbury, Mass.—A. P. Nelson, 433 Cuyler Ave., Trenton, N. J.—R. B. Nichols, care Dunn & McCarthy, Auburn, N. Y.—Joseph Oppenheim, 213 Belmont St., Everett, Mass.—Walter Palmer, 120 East 24th St., Chester, Pa.—Leon W. Parsons, 4 Conant Hall, Cambridge, Mass.—Joseph N. Paul, 53 Woodbine Ave., Rochester, N. Y.—Bion L. Pierce, care Pierce Hardware Co., Taunton, Mass.—B. T. Ross, 649 Fountain St., Grand Rapids, Mich.—R. D. Sampson, 270 Third Ave., Niagara Falls, Ont.—Tracy Van Scudder, Long Beach, L. I.—Herbert G. Shaw, 33 Lake Place, New Haven, Conn.—Philip B. Terry, care Kirkman & Son, 215 Water St., Brooklyn, N. Y.—Geoffrey R. Thayer, 120 Summer St., Bluefield, W. Va.—Ralph L. Thomas, Y. M. C. A., Baltimore, Md.—Charles E. Trull, 99 Westford St., Lowell, Mass.—J. W. Underhill, 9 Cliff St., Montpelier, Vt.—Charles Walton, 19 Walnut Place, Revere, Mass.—R. K. Wright, care N. & W. R. R., Cooper, W. Va.

1914.

CHARLES PARKER FISKE, *Sec.*, 99 Aspen Avenue, Auburndale, Mass.

ELMER E. DAWSON, JR., *Asst. Sec.*, 28 Washington Avenue, Winthrop, Mass.

C. J. CALLAHAN, New York, *Asst. Sec.*, 504 W. 151st Street, New York City.

At a meeting and dinner held at the Technology Club of New York the first part of November, the matter of electing a secretary for our class of the New York district was brought up. "Buck" Dorrance had already suggested the idea to the secretaries, who agreed with him that it would be a good plan, and those men who were present at that dinner were unanimous in their selection of C. J. Callahan, XI, to fill the newly established position. We are heartily in favor of him, since he has shown a great deal of enthusiasm in planning several class dinners at the Technology Club in New York on his own responsibility, and has proved in many ways a live man. Congratulations, Callahan, and keep the good work up!

Right here let us say that every one of you, whether he be far or near, should be seriously thinking now of the big reunion from June 12-14 inclusive. Plan to take the week off as part of your vacation and you will never be sorry that you spent it in this manner! It will be the largest Tech gathering ever, of course, but it will be so much larger and so much grander that the imagina-

tion of the most imaginative of you would have to be stretched a great deal before you could picture anything as grand. We urge every one who can possibly come to do so, and above all, to read all the literature on the subject possible.

When you consider that a boat is to be chartered to bring the men from New York, you see just one small pleasant aspect of the reunion. You benedicts! This is for you as well! You are not only asked but urged to bring your wife. There is special entertainment and everything arranged for her, so why not bring her along to enjoy with you the good time and have her meet the old guard with which you used to spend your time. We look to you, married men, exactly as much as the bachelors.

Singing is to be one feature of the reunion. A cup is offered for the best song submitted. Here is a chance for those musically inclined. Send in your contribution to the secretary and he will see that it reaches the proper authority, although he cannot guarantee that you will receive the cup.

One day is to be devoted to a frolic at Nantasket, with every class giving what is called a stunt. Suggestions for this, which will give everyone of our class present a chance to participate, are earnestly solicited. *We hereby agree to give a reward to the man who contributes the best idea for a class stunt, this reward to be total exemption from class dues for 1916.* Judging by the great readiness with which we are unable to extract any signs of the nominal sum of one dollar from most of you, this offer of reward ought to bring out great results. But seriously, now, there ought to be some excellent ideas in the heads of some of you, if not all of you, and all we ask of you is to be generous with them, so that we all may profit by them.

Now you sceptics think this reunion will cost a lot of money. It will cost some, but not a great deal and probably the major part of it will be borne by the Alumni Association and by your class, so we urge you again to come.

Speaking of marriages, we have two or three to tell you about. Otto W. Fick, II, was married on October 16 to Miss Clara Augusta Bowen of St. Louis, and is now living in Wilmette, Ill.—Percy F. Benedict, I, was married on November 22 to Miss Elinor Bradford Clough, daughter of Mr. and Mrs. Joseph L. Clough, of Nashua. The wedding took place in that city and was largely attended. Arthur P. Shepard, VI, also of our class, was one of the ushers. Benedict spent five months with the American Telephone and Telegraph Company immediately after graduation, being superintendent of construction of a building erected at Bloomington, Ill. He is now connected with the United States' Coast and Geodetic Survey, and will be located in Washington this winter.—We received announcement cards from R. D. Brown, VI, to whom Miss Annie Laura Kelley is betrothed, and through the Boston press we have learned of another engagement: Miss

Elizabeth J. Turnbull of Charlestown to J. Lester Howland, the wedding to take place during the Christmas holidays.—We are glad to have been sent notices of these affairs and hope that we may be advised of all the marriages of men of the class.

It has been some time since we have heard of Charlie Fox, XI, until lately, when we have read once or twice in the New York papers of his having been captured. This, to our knowledge, is not confirmed, and we hope it is erroneous information. "Pa" Coburn, known to most of our class, was kind enough to loan us two letters from Charlie, which, with his permission, we print below:

The trip so far has been slow and but for dodging submarines and mines, it would have been rather dull. After the usual experiences of a transatlantic voyage, without the seasick part (for which I am duly grateful) we reached Gibraltar on May 28. We were detained by the British and our contraband cargo of rice and barbed wire taken off, also a German, who claimed to be a Dutch chef. Later we were told that he had confessed and that he was the doctor on the *Prinz Eitel*, the German cruiser interned at Newport News. As some one once said,

"Behold, we lose our fourth at whist,
A chair is vacant where we dine."

He played a good game of poker, too. After recourse to the consular agent, we were allowed to land and so we took in Gibraltar and two towns on the Spanish coast. Leaving there the afternoon of June first, we reached Palermo the fifth, but were not allowed to land. After twelve hours there we sailed and after passing safely through the straits of Messina, we are now rounding the tip of Greece, forging ahead at the rapid rate of about nine miles an hour.

We reached Piraeus the 8th of June and stayed in Athens for three days. That was sufficient time to see all the most interesting places. On the 11th we sailed for Saloniki, arriving the next afternoon. We were met by Sir Thomas Lipton, who has been helping Serbia and was at that time on his yacht *Erin*, now a hospital ship. He entertained us at tea that afternoon and on the next day at luncheon. Here we met a good many English and French nurses, a few American doctors and Doctor Strong, the leader of this commission.

In the next few days the party was split up, some of the men going to their respective stations, which are to be permanent. Two were sent to Montenegro. I was left in Saloniki to see to our shipment of supplies to Serbia. This took about a week. Some shipment—350 tons! After getting this off, I came up here and have been here two weeks. This town—Velis—is in New Serbia and therefore Turkish in character. There are about ten thousand soldiers here, and our work has been mostly among them. Fumigation and disinfection of hospital and barracks, fly and mosquito prevention work, vaccination of the soldiers with vaccine against typhoid, cholera and paratyphoid, and in the engineering line, improvement of the water supplies and methods of sewage disposal, are some of the things that are being done. We bathe about six hundred men a day and steam their clothes and blankets. It is very interesting work and is accomplishing great results. There are eighteen of us in camp. We work from 6 a. m. till 5.30 at night, with two hours off in the middle of the day. We go to bed about eight and arise at five. It surely is a healthy life. The temperature is high during the day, but the nights are very cool, fortunately. As far as being near the front and learning war news we might just as well be in the Sahara desert.

Conditions are much better now. There are only a few cases of typhus here. I saw five yesterday at the hospital, three of whom died last night. We expect to move soon to Lirr Pazar, where it is reported there are 2,000 cases of typhoid out of a population of 12,000.

H. K. Chow, II and XIII, sends the following word:

I am getting along finely with the Curtiss Aeroplane Company here in Buffalo (N. Y.). This is the largest company of its kind in the world, but as my own field of work is much larger in China I expect to return there at the end of next month (December).

The *Oswego Daily Times* of November 13, prints the following:

Arthur L. Todt has been selected by the Standard Oil Company of New York, as one of two men to take charge of the construction, etc., of the company's floating equipment in the Orient. He will sail from Seattle for Hong Kong, China, November 30.

Mr. Todt will also act in an advisory capacity to the marketing department of the company in the Far East and will aid in the development of the transportation equipment of the company in China and other parts of the Orient.

For the past several months Mr. Todt has been at the New York offices of the Standard Oil Company, familiarizing himself with duties he will be called upon to perform.

He specialized in naval architecture at M. I. T. and was chosen from among a large number of students there for the position in China. This recognition of Mr. Todt's ability, coming from such an exacting concern as the Standard Oil Company is known to be, is pleasing to his many Oswego friends.

"Dutch" Schaurte, II, is still in active service in the capacity of officer. He has had some very remarkable experiences, about which we hope to hear in the next REVIEW.—A. G. Long, Jr., seems to be getting along very well with the American-La France Fire Engine Company in Elmira.—Buck Dorrance has resigned his position with the Campbell Soup Company to take up work with the Franco-American Soup Company.—B. P. Crittenden, II, is doing some very interesting work for the city of New York under the State Commission of Ventilation. The *New York World*, of October 3, gives considerable space to a cartoon and article covering the work in which he is interested, as follows:

Last week an educational and investigational work was started in Public School No. 151, where an experimental station in ventilation has been established under the auspices of the State Commission on Ventilation, with Mr. Crittenden in charge.

Last year the commission's investigation class experimented with a sturdy class of volunteer students in an observation room in the College of the City of New York. This class was put through all sorts of stunts to determine how the inclination to do physical and mental work was increased or lessened by different temperatures and varying degrees of humidity.

The investigation showed, among other things, that the student mind isn't very snappy in a hot room, thus scientifically establishing a fact which has been generally recognized since the days when the Dutch opened the first red schoolhouse down at Corlears Hook.

At School No. 151 a mixed class of boys and girls tackles the geography, grammar and arithmetic in a room fitted with air intakes at each desk, each intake capable of supplying enough air for the individual use of the pupil at the desk and have enough left over for teacher.

By this system the air in the room is changed 6 1-2 times an hour. It is hoped that the pupils may be able to get Mr. Maxwell's well-known rules of grammar through their heads with ease under proper air pressure.

Harold Fay sends a word from China:

I am now spending most of my time discoursing at great length on the fine points of the use of "a" and "the," to a bunch of young celestial hopefuls, who need English to study forestry next term. I was just on the point of leaving Shanghai for the Philippines, when I heard that they needed a man the worst way up here for a

half year, so I signed up. Now here I am, singing hymns and doing all the other extras.

Percy McCullough writes as follows from India. This is the sort of a letter we enjoy receiving:

When I first came out here, a little over a year ago, I did not know anything about what I was coming to. I rather imagined that I would find a race of fierce, half civilized people who have to be handled with gloves. Instead of that I find that they are handled with boots, at least in this part of the country. You can kick them around and trample on them all you want and they seem to thrive on it. They expect to be oppressed by the white people and are disappointed if they aren't. That is, maybe they are not exactly disappointed, but they have more respect for a person who is severe with them than for one who is not. They work for ridiculously low wages, from twelve to twenty cents a day for ordinary coolies and mill workers, while the native clerks in the offices, who are educated and speak English get from five to thirty dollars a month, according to their ability. That is the reason for so many large mills here.

The natives are, as a race, small and physically weak, due probably to living in a country which is full of malaria and other diseases. They also live in the most insanitary way; mud huts, no drainage nor cleanliness. Three or four people will sleep in a small hut, say eight by ten, with all the windows and doors shut tight, as they seem to abhor fresh air at night. This only applies to the lower classes. The better educated and wealthier classes live in fairly decent houses built off the ground three or four feet.

The principal food of the natives is rice, which they cook in a number of different ways. They can live on about twenty or thirty cents per week per person, so their wages do not seem so small when you consider that. They are out for all the money they can get. Honesty among the natives does not exist. If there is any way they can cheat or steal from the sahibs (the white people) without getting caught they will do it. If you send a man out to buy something for you he always charges a little more than he has to pay for it. Unless watched the native workers will sit down and do nothing. In the mill there are always one or two Europeans in each department, Scotchmen generally, to drive the workers. The most successful departments are those in which they can be paid by piecework. When the natives know that they are getting paid according to the amount of work they turn out, they will work hard all day and all night too, if the mill ran all night.

Our mill employs about thirty-five hundred workers at present. When the extension is finished it will employ about seven thousand. The construction work on the extension is practically finished but the machinery has not arrived yet. The mill building itself covers about twelve acres and is a one-story brick work structure. Besides that, there are the office buildings, a storehouse for mill supplies, and three blocks of jute storehouses, two blocks 215 feet x 128 feet and one block 258 feet x 128 feet. So you see that we cover quite a decent area.

The mill is situated about nineteen miles north of Calcutta, on the Hooghly River. We have sixteen Europeans, as they call the Scotchmen, English, Americans, in fact any white man out here is a European. Twelve of these are Scotch and the other four are Americans. We have three houses on the compound. One is for the mill assistants, one for the general manager and the fellow that runs the Calcutta office. The other is a double house. The manager and his wife live in one side, and I with two other Americans live in the other. The houses are built of brick and are very comfortable, with wide verandas and large high rooms. All the rooms have one or two large punkaks (electric fans) suspended from the ceiling, and above all the beds there is one. Otherwise it would be almost unbearable in the hot season.

We do not have much time for sports, except on Sundays and sometimes on Saturday afternoon. We have four tennis courts on the compound, and there is a fine golf course at Barrackpur, about four miles from us. For indoor sports we have a billiard table and cards. Thus I can continue the course I started in the Tech Union when I used to cut lectures to play bridge. Only you play it so much out here that you soon get sick of it.

I have to get up at five every day except Sundays, and get down to the office at five-thirty. I knock off at night at six-thirty. This makes some long day, believe me, and just at present it is dark when I go to the mill and dark when I finish. However, I take an hour off at eight o'clock and another at four o'clock and sleep for a couple of hours in the middle of the day so it is not so bad after all. Up until last July I was working outside on the construction work. Then one of our Calcutta office staff went to the war and they took the mill office-man to fill his place. As the construction work was nearly finished they flung the mill office job at me and I am still at it. About Christmas time we expect a Harvard man out and he will take my present job. I think then I will go inside the mill and learn the business. A jute mill is much the same as a cotton mill except that the machinery is less delicate.

On Sunday, there being no church in our immediate vicinity, I very reluctantly give up the pleasure of going to church and devote my time to tennis, golf, etc. We generally have a week-end party, from Saturday afternoon to Monday morning. We have somebody up to the house or else we go to Calcutta for a blow-out. There are not many Americans out here compared with Englishmen and Scotchmen, but I know quite a number in Calcutta. There is only one other M. I. T. man out here that I know of. He is a 1912 Course VI man and is with the Standard Oil Company. Living so far apart, we do not see much of each other during the week but as he comes up to Barrackpur for golf nearly every Sunday morning we quite often get a game together. His name is E. M. Mason and his home is near Boston. There are also quite a lot of other Boston men here and I think the Boston delegation is the largest among the Americans in Calcutta.

One thing that surprised me when I arrived here was to find that France owns territory in India. She has several small colonies in different parts of the country and we are in one of them. It is called Chandernagore. The town itself is about three miles from the mill but just where we are situated there is a strip of land extending from the river about two or three hundred feet in, and about a mile and a half long. Our compound is on this strip and all the bungalows, so you see I am really in France. The mill, on the other hand, is back a little ways from the river and is entirely on English territory. As we send our finished goods to Calcutta by boat, they have to pass through this strip of French territory and we have to pay an export tax, very small, to the French government.

Chandernagore is the seat of government of the French territory in this part of India. The governor and other officials live there and also a small colony of French people. They have a club there, "Le Cercle de Chandernagore," to which we belong and we usually go up there for Sunday evenings. There are some nice mademoiselles there so we can generally have a good time. I am reviving my French, dead for six years, and can get along a little now. It would be easier if I were not also learning the native languages, Hindustani and Bengali.

As Chandernagore furnishes about the only real social life we have outside of Calcutta I do not know what we would do without it. They have a reception or a dance or a concert there every little while so it makes life a little more bearable. We have also given a couple of dances here at the house, but it is not like the good old U. S. where there is something doing every minute.

We are just starting the cold season now and have about four months of what many people say is the best climate in the world. The rest of the year, however, is nothing but heat. I have stood it pretty well and have had no sickness or fever so far. We get two or three weeks off every year and spend all we have saved traveling round India or going to some hill station or seaside town. I have not seen much yet, but before I go home I am going to visit as many places as I can.

Well, I hope any fourteeners who see this and remember me will also remember that news of M. I. T. is scarce out here and anything will be welcome. My address is Angus Lodge, Bhadreswar, E. I. R. Bengal.

Here is a letter from Z. Y. Chow, written November 26:

I arrived at Shanghai, where my home is, on June 2, and stayed with my parents for about two weeks. Then I left Shanghai for Peking to look for something to

do. It was very fortunate indeed that I got a position, which I am still holding, within one week after I arrived in Peking. I am now as an engineer in the Bureau of the Peking Municipal Administration. My work in this bureau is not very much and in order to utilize my vacant time for some good purposes, I am now also teaching a course of elementary sanitary engineering at the Peking Government University. I know myself very weak; that I am not a good teacher, but the reason that I am doing it now is that this would make me to review my books and help me to have a better understanding of my professional knowledge.

Mr. Turpin Hsi has also returned home. He is now at Peking with me. I met Mr. Adams, '08, while I was at Shanghai. He told me that Mr. Burton has written him and told him about me. He is now the secretary of the M. I. T. Club in China. There are six M. I. T. men at Peking, four at Hankow, one at Nanking, eight at Shanghai, one at Fookien and one at Canton.

C. J. Callahan sends the following:

Malcolm Lewis, VII, is now with the Montclair (N. J.) Board of Health.—F. P. Gilbert, XI, has resigned his position with the Maryland State Board of Health to go to Freehold, N. J., as assistant superintendent of water works there.—P. A. Russell has left the subway work to become associated with the Aberthaw Co.—E. W. Bowler, XI, was on here two weeks ago. He is with the U. S. Geological Survey and has been up New York state all summer sketching topography. He was driven out by a snow storm two weeks ago and on his way to report in Washington he stopped off to see some of the sights of this little town. I showed him a few!

President Maclaurin was here last Saturday (December 11) and gave a very interesting talk about the New Technology. All of the fellows were mighty glad to see him again.

I spent last Sunday (December 12) with Tom Duffield in Summit, N. J. He is very nearly the whole board of health in that spotless town. Tom and his wife are very nicely settled now in the little white cottage with the green blinds. He has acquired the responsible head-of-the family air, knows everyone in the town, and gives talks down at the Y. M. C. A., the Methodist Church and the High School.

We have just received announcement of the arrival of Thomas Jefferson Duffield, Jr. Our heartiest congratulations! Our advice is to bring him up like his father and send him to Tech. Tom says in part:

I feel that my work here is so primitive and so relatively unimportant as to be of but little interest to anyone and to readers of the REVIEW in particular.

I am trying (against the resistance of the majority of people here, including my office force) to instill into the minds of the thinking portion of our population, the value of sanitation and hygiene. It is a hard task to try to keep people well even when they are willing to do their share, but to try to keep them in good health in spite of their opposition (or lack of coöperation, which amounts to the same thing) is a man's job. I am still wondering if I am big enough to put it over, but I am encouraged at times when even a small point is popularly decided in my favor, or when some citizen of Summit commends the work I am attempting to accomplish.

The work of any health department is necessarily confined to that which directly or indirectly affects the public health. In a small town such as this (9,136) the amount of money usually appropriated for the work is adequate to only scratch the surface of that which will bring the most direct results and the really more vital problems must be left untouched. I will try to explain this by examples. In Summit, we supervise the milk supply (examine samples monthly, inspect dairies frequently); we examine specimens from persons suspected of communicable diseases, and quarantine those so affected; we make routine inspections of private premises for accumulations of refuse; we receive and record marriages, births, and deaths, and also supervise the construction of plumbing, but at present we have no public health nurse who should be such a great help to every local board of health.

Such a nurse could relieve the health officer of the supervision of communicable disease cases and could visit these cases as often as necessary. She could visit all persons suffering from tuberculosis and instruct them in practices tending toward their own improvement and the protection of others. She could instruct mothers in the care and feeding of infants and, after she had become intimately acquainted, she could give pre-natal instruction to expectant mothers. This infant welfare work is the most fruitful of all work which can be done by a local board of health. The saving of infant life is apparent as soon as a nurse is established in her work. Montclair and Summit are towns of comparatively the same make-up of population, i.e., the same percentage of foreigners. There, the infant mortality rate (deaths of infants under one year, divided by the number of living births and multiplied by 1,000) was last year 88. Summit's rate was 92. They save 24 of every 25 and we about 9 out of 10. If our rate could be reduced to their figure it would mean a saving of twelve infant lives annually in Summit and with such a life, valued conservatively at \$5,000, you can see that the economic saving would be great if you stop to figure the net cost of saving them over the cost of burial.

We are not given the appropriation to investigate and improve housing conditions among the poorer classes, nor to properly supervise the food supply other than milk.

In all—it's a long, sad story and, as I said in the beginning, my experiences are too unimportant to be of interest to anyone. Wait until my hopes are realized and then I'll write you more about them.

This was not intended to go to such lengths and I must stop or I shall have to put this in book form.

I am enclosing some letters from Chet Ober.

"Chet" writes from Steamer Bay, Alaska, that he didn't see a newspaper for a month, and goes on as follows:

Talk about being lost in the woods! Why man, here we are in our own native land, on United States territory, and we are not only lost from civilization, but chances are against ever finding our way back. Even then, we shall probably never be the same!

Charlie Shaw, although in Alaska, is not with me. At present he is only fifteen miles away, and, if all goes well, I hope to see him before very long. Kirk McFarlin and Eddy Taylor have evaded my searching looks, but there may be hope of finding them yet.

Another letter, dated in Seattle, November 28:

At present we are attached to the Seattle office. Charlie Shaw and I received orders sending us to the Philippines on January 1, 1916. We sail on the *Empress of Japan* from Vancouver, B. C., via Japan and China. We are going to be gone two years.

H. B. Richmond, VI, has left Stone & Webster to become assistant to the manager, Central Station and Agency Department of the General Vehicle Co., Inc., in Long Island City, N. Y.

A letter from N. A. Thompson, Jr., reads as follows:

Your good letter dated August 23 after many forwardings has at last reached me here in the interior of China, 1200 miles from the seacoast and 600 miles from the railroad. It was more than welcome, I can assure you.

Last September I entered the employ of the Standard Oil Company of New York. During October, November and a part of December I was located for them in and about New York City. January and February I spent in the oilfields of Kansas and Oklahoma. On the 27th of February I sailed from San Francisco for China. My trip took me through Honolulu, the one true paradise of the world, Yokohama, Kobe, and Nagasaki, all three good examples of what the precocious kids of the universe are doing with their contemptible system of espionage, and finally to Shanghai across the Yellow Sea. It was a wonderful trip in every sense.

In Shanghai I had tiffin (luncheon) with some of the members of the Technology Club of the Far East and had a most enjoyable time. The following day I journeyed by rail to Tientsin and thence to Peking, the seat of the Government of China.

I am connected with the Producing Department of the Standard Oil Company of New York. Their office in China is in Peking and here I remained for three months absorbing all that I could of the Chinese language and customs. In June I started for the interior in company with Paul Stanley Hopkins, a Tech man of the class of 1910. From the railhead at Mienchih, Honan, we traveled on horseback accompanied by a mule train for three solid weeks all day long. It was some trip, but it gives you a viewpoint of China that is invaluable and one that you would get in no other way.

This work here is carried on jointly by the Standard Oil Company of New York and the Republic of China. As it is still in the stage of diplomatic negotiations I am not at liberty to divulge any of the details of it. We are right on the firing line of the oil business and the experiences, opportunities and life are wonderfully valuable. Some time I may be able to tell you more and to show you some pictures.

Do not forget or neglect to start making your plans NOW for June 12, 13, 14, 1916.

Address Changes

O. W. Fick, 927 Greenleaf Ave., Wilmette, Ill.—N. E. Brooks, 187 Park St., Newton, Mass.—H. K. Chow, care The Curtiss Aeroplane Co., Churchill St., Buffalo, N. Y.—C. E. Fox, care American Red Cross Sanitary Commission, Velis, Servia.—A. C. Dorrance, Fairmount Apartments, Jersey City, N. J.—H. V. V. Fay, University of Nanking, Nanking, China.—H. B. Richmond, 318 W. 57th St., New York City.—I. H. Lovett, Omaha, Elec. Lt. & Power Co., Eng. Dept., Union Pac. Bldg., Omaha, Neb.—N. A. Thompson, Jr., care of The Standard Oil Company of New York, Producing Department, 26 Broadway, New York City.

1915.

WILLIAM B. SPENCER, *Sec.*, 552 Main Street, Medford, Mass.
FRANCIS P. SCULLY, *Asst. Sec.*, 1802 Massachusetts Avenue, Cambridge, Mass.

THOMAS J. BARRY

The class of 1915 has suffered its first great loss. On November 23 Thomas J. Barry, Course IV, was killed while working for the Aberthaw Construction Company at Quincy, Mass.

The breaking of a staging on which Barry and three men were working allowed all but one to drop forty feet to the ground. One was killed instantly, Barry lived about fifteen minutes but never regained consciousness, the third escaped with a cut over his eye. The shock of the two deaths was felt by everyone on the entire job.

"Tom," as he was known by his classmates, was one of the most popular fellows of the class. Quiet, democratic, unassuming, yet ever ready to help wherever he could, he was universally liked and respected. To those who were present at class day last June the

picture of Tom dressed in his running suit representing the victorious class relay team is still vivid.

While at the Stute Barry was a member of the class relay team, clerk of the class, on *Technique* Electoral Committee, Class-Day Committee and treasurer and president of the Architectural Engineering Society.

His address was 70 Mayfield street, Dorchester. He is survived by his sister and mother.

To say that we shall miss him is not adequately expressing our feelings, for while he was among us he was one of the truest of our class, doing his tasks, working with us and for us, as a gentleman and a friend.

While at work since commencement he had met with much success. His employers had rapidly advanced him and he gave every indication of making good. May his memory be our inspiration to succeed as well in all our earthly endeavors.

We are very glad to learn that Henry Berger, Jr., VII, has returned from his work in Serbia. We have not received any letter as yet telling of his experiences while working to exterminate the dreadful typhus, but newspaper clippings announced his arrival and his matrimonial conquest. His capture was a Serbian maiden but from all indications it would be hard to say which is the more captivated, Berger or his wife. From the *Boston Globe*:

When Henry Berger, Jr., recently went to Serbia as a part of the expedition under the direction of Doctor Strong, neither he nor his parents had any idea that within a comparatively short time he would lose his heart to an accomplished Serbian damsel. Young Berger was granted a diploma last year by the Massachusetts Institute of Technology. He joined the force of Doctor Strong which went to Serbia for the purpose of improving sanitary conditions there, eradicating disease and saving life. Mr. Berger is a product of the local high school (Marlboro). After being graduated from there he attended Clark College at Worcester, and has ever been studious.

He and his bride arrived in New York this week with the Red Cross Serbian expedition. Mrs. Berger, knowing that her son was coming, went to New York to greet him, and when she was presented to the young Serbian bride it was the first intimation that she had of her son's marriage. The bride and groom met soon after Mr. Berger's arrival upon Serbian soil. He had written his parents something about the young woman, and they were inclined to think that a marriage might result, but did not know positively. The younger Mrs. Berger is said to be a representative of one of the finer families in Serbia, and to be finely educated, and through the teaching qualifications of her husband is being taught English.

A number of the 1915 crowd who left before getting their degree are found to have gotten the jump on most of the rest in matrimony at least. Miss Janet Higby, V, is now Mrs. Janet Higby Lewis. She was married to Malcolm Lewis, '14, on January 1, 1915. Her home is at 4 Claremont place, Montclair, N. J.—Renouf Russell is the proud father of a son born October 10, 1914. Renouf is a gentleman farmer on Mondamin Farm, Keene, N. H.—Virgil E. Wardwell, I, also has a boy. Virgil is a contractor's assistant at Stamford, Conn.—Frank R. Coburn is married and is in business under the firm name of Maynard & Coburn, engineers

and surveyors, Watertown, Mass.—The last member of the married column is Frank Marvin. He is a chemist in Emporium, Penn.—From present indications many of the parson's wives will be sporting new hats during the coming year at the expense of 1915 men.—E. A. Teeson, II, says, "Sure," he is engaged. He has been hunting in Canada and has started to work this fall for the Goodyear Rubber Shoe Company at Naugatuck, Conn.—"Ken" Roy, II, is "still hopeful." Ken is working for the Aberthaw Construction Company. Lately we have seen him quite frequently as he has been living in Boston and making daily trips down to the job in Quincy, Mass.—Ed Norberg, IV, was engaged while at the 'Stute but has just openly acknowledged the fact. Ed writes that he is an architectural draftsman for John Parkinson, architect, in Los Angeles, Cal., and he finds it very interesting and instructive.—L. H. Bailey, X, is working for his M. S. degree. He was awarded a \$250 Scholarship from the Austin Fund. His girl will have to wait a while longer.—From the *Globe* we publish another announcement:

Dr. and Mrs. Albert H. Tuttle announced the engagement of their daughter, Elsa Davis, to Mr. Charles Parker Washburn, Jr., at a tea given at their home, 350 The Esplanade, Cambridge, on Tuesday. Miss Tuttle is a graduate of Miss Chamberlayne's School, 1914, and has devoted much time to the study of music. Mr. Washburn is the only son of Mr. Charles P. Washburn of Fairfield street. He prepared for Technology at the Stone School, and for the past three years has been associated in business with his father. The marriage will take place in the early spring when the new home, now in process of construction, will be completed.

Others who are engaged are: E. D. Yerby, C. G. Norton, II, Joe Masfarer, II, H. K. Patten, II, and H. B. Pickering, I.—Ed. Yerby is assistant hot mill foreman at the American Sheet and Tin Plate Company, Gary, Ind.—Charlie Norton says:

I've got a mighty good firm to work for, Westinghouse, Church, Kerr & Company, and like my work very much better than I had hoped to. I expect to leave the drafting room shortly and become assistant to one of the head engineers. However, New York is my idea of a rather rotten place to live in.

Pickering is assistant engineer at the Deepwater Point Plant, Pennsgrove, N. J.—Joe Masfarer is assistant director of the Jose de Diego Institute, San Juan, Porto Rico.—B. S. Atkins, "Tommy," writes as follows:

Having been a part of Tech, '15, for but one year, I regret to say that I have fallen away from my former classmates and received with a great deal of pleasure your note requesting statistics. I am returning you the information blank and a check to cover class dues.

I have been located in Montreal with the Shawinigan Water & Power Company and have come in contact with several Tech grads and undergrads. At present there are two of us here—myself and H. E. Randall, Tech, '13. At one time we had three others, Joseph McKinnon, '12, Bill Gabler, '15, and Lew Fields, '15, both of whom you doubtless know; and since then "Hip" Bryant, '14, and my brother Arthur, '17, have both spent some time with the Shawinigan Company. So you see M. I. T. is somewhat well represented in this particular spot.

I have been lucky enough to find the "right girl" and expect to have an "at

home" sometime about the first of the year. I will be only too glad to help any 1915 man and to hear news of any, and to bear my part in keeping the class together in years to come.

G. H. Roberts is engaged and only wants a little time in which to get married. He is employed as assistant teller by the Bridgeport Trust Company, Bridgeport, Conn.—Gabe Hilton, III, is "not quite," while J. F. Guthrie, II, is "engaged in hard work" as a mechanical engineer, Arnold Print Works, North Adams, Mass. He says:

The air in the Berkshires is fine but give me the wintry blasts which whistle around Copley Square.

Some loyalty there, what?—Poor Boots Malone, VI, has been "disappointed" and wishes he were back again at the dear old Institute. He is in the engineering department, C. & P. Telephone Company, Baltimore, Md.—T. C. Hsi, III, secured a position with the Thomas Iron Company, at the Richard Mine, Wharton, N. J. His chief work was in sampling and in locating the phosphorus contents of the iron ore, the results of which were embodied in a report to the president. He left this work in September and is now taking courses at Columbia.—Congratulations are extended to Howard Thomas, I, who recently announced his engagement to Barbara E. Daniels, a Wellesley graduate.—Doc. Munyan and Pann Sabin are said to find time from their studies to be hitting the trail to Wellesley quite often.—E. H. Stelle remarks that he was married on August 12, 1915. Congratulations Ned, but can you not spare us a few particulars? Ned is with the New York Public Service Commission, East River Tunnels.—A. H. Anderson, I, is a junior assistant rodman for the Public Service Commission, New York. His address makes us think that our little Andy was so small he slipped down a hole and now can be communicated with only through a tube. His address is Shaft No. 3, Clark street, Brooklyn, N. Y.—C. W. Lacy, VI, is now in the efficiency department of Filene's. He spent the summer touring around the West and visiting the fairs and the Panama Canal.—M. B. Pinkham, I, was in town over Thanksgiving. The bright lights of Broadway have not caused the bloom of health and innocence to leave his countenance.—We congratulate Frank Scully, I, upon his recent business success. He has been made secretary of the John T. Scully Foundation Company of Boston and Cambridge.—K. T. Kahn, X, writes:

Just a note to let you know of my change of location which is as follows: No. 11 The Seymore, Willow and Gurnsey streets, Stamford, Conn. I am employed as research chemical engineer for the American Synthetic Color Company, Sunnyside avenue.

For the sake of record, let me add that for several weeks I was located in a little town in West Virginia on the Potomac River where I was in the laboratory of the West Virginia Pulp and Paper Company, Luke, Maryland.

—R. B. Stringfield claims to have had a rough time of it at first with the American Beet Sugar Company, Oxnard, Cal., but has bettered himself now. He is with Smith Emery and Company, chemical engineers, 245 Los Angeles street, Los Angeles, Cal.—Les. Fletcher is one of the prompt chaps in letting us know of his address changes:

Am dropping you a line to let you know of a change of address and occupation. Am now assistant engineer of tests at the La Belle Iron Works, Steubenville, Ohio.

Worked with Bill Holway in Providence for a while on survey work. Besides him and Red Waterman, I haven't seen any of the famous 1915 class since June.

Read this long letter from Guernsey Palmer, then a few of you fellows had better brace up:

Please excuse me for living after being dead so long. Up until two weeks ago I just existed by working at the Lackawanna plant, eating, and sleeping. That was all there was to life. However, I have since struck something reasonable and interesting with J. P. Devine Company. And, by the way, on the inquiry blank you sent out please change my position from engineer to draftsman. It would be a little more in level with my work and ability—so far.

I have not seen a '15 ex. since leaving New York graduation week. Met a couple there at the Tech club, and also "Pa" Coburn. Indeed I would be glad to see one and I wish I were in a town with some of the boys. The youngest men here are "11's" and haven't seen them yet, except Root, who is secretary of the local club.

There is a live bunch here and at the Falls. The Falls is practically solid Tech men, in fact. The local club holds a monthly luncheon and a monthly dinner, where the men become young again and have some lively times.

I think your idea of districting our class is excellent. And when you get a chance let me know if there's anyone within a thousand miles of Buffalo from old '15.

Have heard from a few of the boys. Some of the Course II gang started a "round robin" but it hasn't reached me after a complete round so I can't tell you much. I suggested that each man take his own letter out and send it to you with class dues when it came back. Perhaps they will carry it out, I hope so.

Palmer gives us also news of some of the men as follows: "N. E. Kimball and H. C. Edgerton are with the Remington Arms Company at Bridgeport, Conn.—H. I. Lewis is in Paterson, N. J., 227 Hamilton avenue. I think he's in a jute mill with aspirations for and promises of superintendency in due time.—Durkee is residing in Brooklyn, N. Y., 601 St. Mark's avenue. Don't know what he is doing as round robin hasn't returned. You have undoubtedly heard from the Akron, Ohio, crew.—Hanchett, A. E. B. Hall, Wheeler, and H. E. Morse are at the Goodyear Rubber Company plant.—Homer Rogers, V, is with the du Pont people in Wilmington, Del., 127 West 17th street, happily working among powder and explosives at organic experimental matters.—M. F. Brandt, X, is also there as a private chemist for one of the du Pont's, address Y. M. C. A., Wilmington, Del.—D. H. McMurtrie, X, is in La Tuque, Quebec, in a pulpmill. Don't know his company, but that address is sufficient. He says, "Reg Pollard, Lapp, and Mack are with the Canadian Explosives Company at Nobel, Ont. Lapp's job is analysis of nitroglycerin and condite! And the others have about as pleasant stunts to do."

That's all that I can tell you, Bill, and much of it you likely know but I thought possibly some of it might be new. Say, let me know where H. I. Knowles, V, is, if you have it.—McMurtrie also said, and it might be interesting to others in similar lines: "My work is partly routine analysis and partly research work in better methods of production and utilization of waste. We've done considerable electric furnace work lately and it is all very interesting."

We have received a very pretty postal from Loring Hall in Tokio, Japan. There was just a little note on it:

Can't find another Tech man here, but expect to in Shanghai.

Wish all the boys could be with me among the chrysanthemums and paper lanterns. Give my regards to everybody. I'll be glad when my REVIEW comes with the news of the rest.

—Alden H. Waitt sent a very interesting letter from Lexington, Kentucky, where he is an instructor in chemistry at the university.

My intentions to write you were crystallized upon receiving the letter from the class of 1915 and so while sending the enclosed data sheet I'll drop you a line or two.

The novelty of the work of teaching has not worn off yet, and instructing is gradually becoming very interesting and quite enjoyable. I have three recitation sections in general chemistry and four or five laboratory sections. The department of chemistry here is very good and has two most excellent men in charge. It has a high standard and the men are kept on the jump all of the time. There are eight on the instructing staff in chemistry besides assistants. We have 325 men taking the course in general chemistry this fall. The registration is about 1200-1300 for the whole university.

K. S. U. is a first class little school. It is nicely situated and has a fine campus of 52 acres. The building in which I am situated, the new chemistry building (there are two good-sized buildings devoted to chemistry alone), is modern and up to date in its construction and equipment. The physics department has the finest equipment of any school I've ever seen, and unless I'm greatly in ignorance of the Institute physics department's resources, Tech doesn't hold a candle to it. The experiment station connected with the university devoted to work on chemical, agriculture and biological lines is one of the finest in the country.

The Kentucky girls are certainly beauties. You should see the way they dress. I've seen hardly a pair of black stockings since I arrived; the tendency being to broad black and white bands, purple polka dots, pink clocks, etc. One cannot help noticing the way the limbs are clad as the skirts are so short. I have a class that is about one-third or more Kentucky belles and so I am getting used to seeing them.

Lexington is a peach of a little city and has fine stores, banks, a nice theatre, good hotels, one skyscraper, and excellent interurban trolley service. It is full of saloons, however. The morals of the Kentuckians are loose. The city is a very pretty one and the country is most fertile. Lexington is the largest loose leaf tobacco market in the world.

—H. T. Bent, XIII, has found a good place with the Newport News Shipbuilding and Dry Dock Company. He says:

Sorry that there is no news of especial importance to send. I was lucky in stepping into a good job—Hull construction work, in the yard itself, and chances are that I'm here for good, for opportunities for advancement appear excellent. We have at present five ships on the ways, seven not even laid down yet, and indications point to additional contracts for submersibles and destroyers, in the near future.

Cornell men predominate here, and I only know of three Tech men besides myself, Sayward, '14, Scanlon, '12, and Heard, '08. As for a Technology club, I think the nearest is at Richmond, a hundred miles from here. However, there is a little "get-together" spirit in the college crowd for about twenty of us, representing Cornell, M. I. T., Michigan, V. P. I., etc., are going to meet the 22d of October for a smoker.

Please keep me posted on anything the class figures in.

H. P. Pickering says:

At present I'm working for the du Pont's at Carney's Point. They are building a pier, 1,134 feet long, 684 feet being a 140 trestle and 450 feet being tangent. Also, there is a quarter of a mile of railroad approach and a ladder track yard of about 75 cars storage capacity composed of five sidings.

By some oversight yours truly was given charge of the location of the entire job and up to date has "got by." Work was started at two ends of the pier and worry as to whether the two parts would meet has nearly turned my hair gray. The pier job will cost around \$140,000, and its purpose is to provide a place for the Atlantic steamers to load powder directly instead of sending the powder to New York as is done now.

If you have perused the first pages of the REVIEW you will have noticed the announcement of the biggest and best of all times for every Tech man. Those who have inquired about reunions will now have ample food for thought. 1915 is going to attend that reunion and have the time of its young life.

The occasion is the regular five-year reunion of the alumni, the dedication of the new buildings, and the fiftieth anniversary of the opening of the Institute. Isn't this enough to call for the stupendous program which is being planned and to demand the presence of every son of Tech? Begin to save your pennies now and next June 14 be in Boston if you have to fire the boss and "hook" freight cars to get there. 1915 has a wonderful chance to start its career right. The occasion will be all the more unusual just because of the stunts we will do and the good time we will have.

Your special attention is called to the features of the April REVIEW. Then all the reminiscences of Institute life will be uncovered to the public. Be sure to send your happy memories to the secretary at once.

We are planning to have a class dinner soon after the first of the year. Watch for the announcement and come, all with an awful appetite.

Below is a list of the men who sent in their statistics blanks too late to be recorded in the November REVIEW. The procrastinators will please cut it short and hurry their slips in: J. B. Wells, I, Fore River Shipbuilding Company, Quincy, Mass.—A. F. Nye, IV, foreman, Aberthaw Construction Company, Quincy, Mass.—Charles P. Washburn, grain dealer, Middleboro, Mass.—R. D. Waterman, IV, timekeeper, Stone & Webster, Boston, Mass.—R. H. Walcott, X, chemist, Canadian Explosives, Ltd., Nobel, Ontario, Canada.—Wilbur A. Swain, VI, designer, Crane Company, Bridgeport, Conn.—R. W. Rhodes, VI, C. H. Tenney Company, Boston.—Francis Hann, banker, 55 Congress street, Boston.—E. A. Weaver, XIV, student, M. I. T.—G. R. Walsh, I, valuation engineer, Minneapolis, Minn.—M. W. Cowles, XI, assistant in sanitary chemistry, M. I. T.—W. S. Thomas, II, manufacturing agricultural implements, Thomas Manufacturing Company, Springfield, Ohio.—Viking Enebuske, I, Public Service Commission, New York City.—J. A. Ball, VIII, industrial research, Kalmus,

Comstock & Westcott, 9 Harcourt street, Boston.—Walter L. Hardenbrook, automobiles, 162 Massachusetts avenue, Boston.—John E. Williams, midshipman, U. S. N. A., Annapolis, Md.—Gooley Yue Fong, VI, Candidate for Ph.D., M. I. T.—Ray O. Delano, I, student, M. I. T., home, North Duxbury, Mass.—Albert E. Sampson, chemist, American Printing Company, 581 June street, Fall River, Mass.—Louis B. Schwarz, manager, Sullivan Machinery Company, Ltd., 806 Shaughanessy Building, Montreal, P. Q., Canada.—E. T. MacBride, N. B. Thayer & Company, shoe manufacturers, East Rochester, N. H.—O. G. Norton, II, engineering department, Motor Truck Division, Packard Motor Car Company, Detroit, Michigan.—C. H. Rosenthal, X, research assistant, Massachusetts Institute of Technology.—H. L. Colby, II, draftsman, Newhall & Blevins, 9 Park street, Boston.—B. E. Adams, publisher, 120 Boylston street, Boston.—W. L. Campbell, transportation office of 3d vice-president, B. & O. R. R. Baltimore, Maryland.—Mervin S. Hart, sp., General Electric Company, Erie, Pa.—Wm. Jennings, I, assistant hydraulic engineer, Power and Light Company, West Temple street, Salt Lake City, Utah.—Frank W. Hall, V, research assistant, M. I. T.—H. D. Swift, II, student, Ford Motor Company, Detroit, Mich.—J. C. Monahan, student, Dartmouth College, $\Phi \Delta \Theta$ House, Hanover, N. H.—Seward Highley, I, Special Tax Committee, Cambridge, Mass.—Wm. E. Ash, IV, architect, Coombs & Ash, 16 Journal Building, Lewiston, Maine.—A. L. Nelson, VI, electrical engineer, Charles H. Tenney Company, 201 Devonshire street, Boston.

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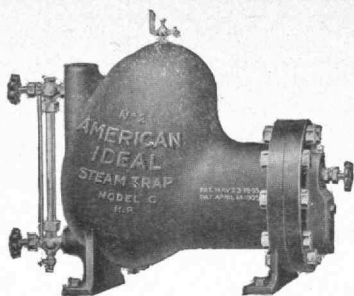
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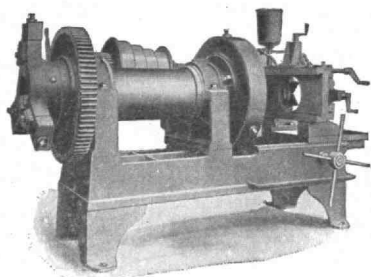
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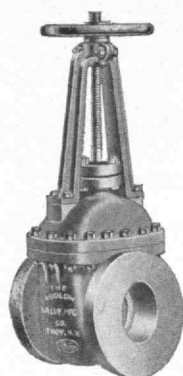
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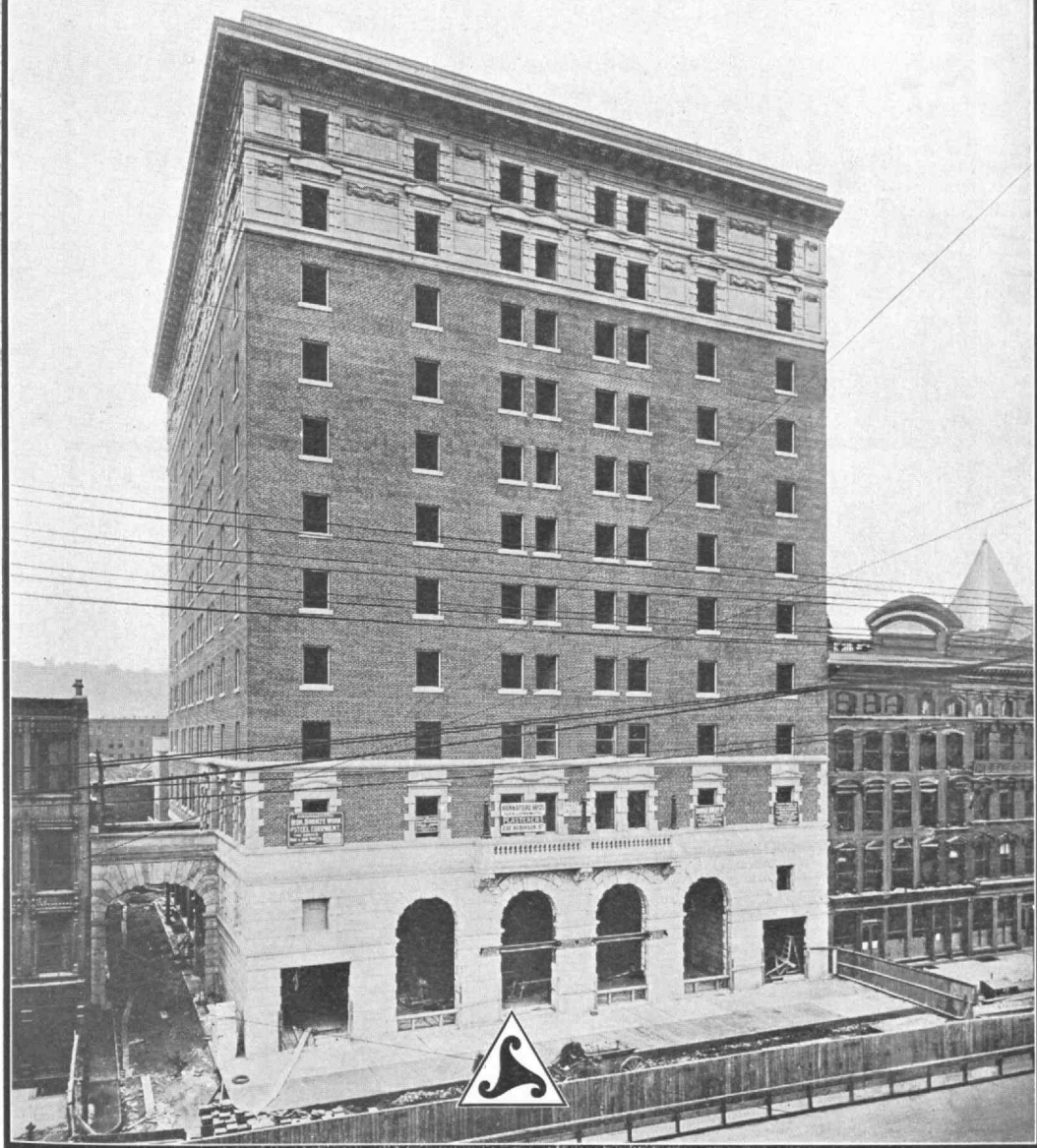
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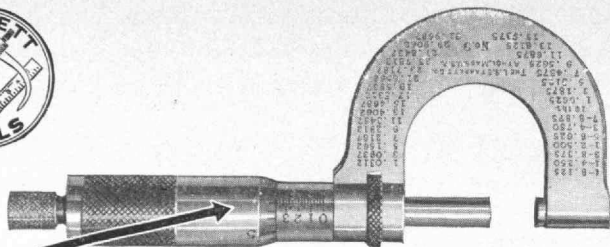
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